MONTGOMERY COUNTY
DEPARTMENT OF TRANSPORTATION

DALE DRIVE SHARED USE PATH & SAFETY IMPROVEMENTS

GEORGIA AVENUE (MD 97) TO COLESVILLE ROAD (US-29)

C. I. P. PROJECT NO. 502109

90% DESIGN SUBMISSION

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MONTGOMERY COUNTY DEPARTMENT OF TRANSPORTATION MAINTENANCE CERTIFICATION

I HEREBY CERTIFY THAT THE DEPARTMENT OF TRANSPORTATION WILL ASSUME MAINTENANCE RESPONSIBILITIES FOR ALL STORMWATER MANAGEMENT FACILITIES AS LISTED AND SHOWN, HEREON, IN ACCORDANCE WITH THE MEMORANDUM OF UNDERSTANDING BETWEEN THIS DEPARTMENT AND THE DEPARTMENT OF ENVIRONMENTAL PROTECTION DATED SEPTEMBER 1, 1986. IF, FOR ANY REASON, FUTURE IMPROVEMENTS TO THE ROADWAY ARE PLANNED THAT WOULD IMPACT ANY OF THE STORMWATER MANAGEMENT FACILITIES INCLUDED HEREIN, THIS DEPARTMENT WILL NOTIFY THE DEPARTMENT OF ENVIRONMENTAL PROTECTION DURING THE PLANNING OR EARLY DESIGN STAGE FOR SUCH IMPROVEMENTS.

DATE

TIMOTHY CUPPLES, P.E.
CHIEF, DIVISION OF
TRANSPORTATION ENGINEERING

OWNER'S CERTIFICATION

I HEREBY CERTIFY THAT ALL CLEARING, GRADING, CONSTRUCTION AND/OR DEVELOPMENT WILL BE DONE PURSUANT TO THIS PLAN AND THAT ANY RESPONSIBLE PERSONNEL INVOLVED IN THE CONSTRUCTION PROJECT WILL HAVE A CERTIFICATE OF ATTENDANCE AT A DEPARTMENT OF NATURAL RESOURCES APPROVED TRAINING PROGRAM FOR THE CONTROL OF SEDIMENT AND EROSION BEFORE BEGINNING THE PROJECT.

DATE

TIMOTHY CUPPLES, P.E.
CHIEF, DIVISION OF
TRANSPORTATION ENGINEERING

DESIGN CERTIFICATION

I HEREBY CERTIFY THAT THIS PLAN HAS BEEN PREPARED IN ACCORDANCE WITH THE "2011 MARYLAND STANDARDS AND SPECIFICATION FOR SOIL EROSION AND SEDIMENT CONTROL," MONTGOMERY COUNTY DEPARTMENT OF PERMITTING SERVICES EXECUTIVE REGULATIONS 5-90, 7-02AM AND 36-90, AND MONTGOMERY COUNTY DEPARTMENT OF PUBLIC WORKS AND TRANSPORTATION "STORM DRAIN CRITERIA" DATED AUGUST, 1988.

DATE

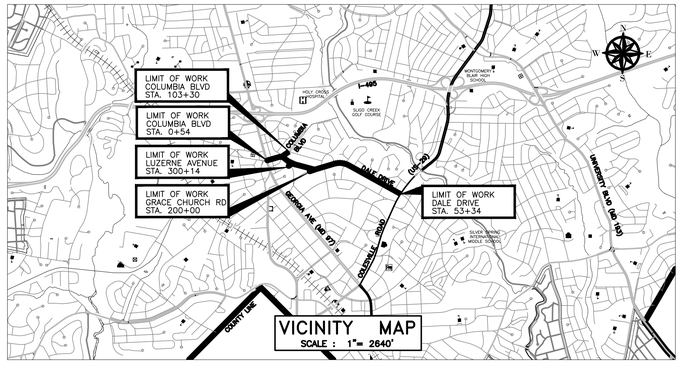
MICHAEL ROTHENHEBER, P.E.
MD. REGISTRATION NO. 18589

CERTIFICATION OF THE QUANTITIES

I HEREBY CERTIFY THAT THE ESTIMATED TOTAL AMOUNT OF EXCAVATION AND FILL AS SHOWN ON THESE PLANS HAS BEEN COMPUTED TO 7,701 CUBIC YARDS OF EXCAVATION, 677 CUBIC YARDS OF FILL AND THE TOTAL AREA TO BE DISTURBED AS SHOWN ON THESE PLANS HAS BEEN DETERMINED TO BE 222,156 SQUARE FEET OR 5.10 ACRES.

DATE

MICHAEL ROTHENHEBER, P.E.
MD. REGISTRATION NO. 18589



THE FOLLOWING MONTGOMERY COUNTY STANDARDS ARE REQUIRED FOR THIS PROJECT:

MC-100.01 - COMBINATION CONCRETE CURB AND GUTTER - TYPE A
MC-110.01 - RESIDENTIAL SIDEWALK
MC-301.01 - RESIDENTIAL DRIVEWAY

THE MOST CURRENT VERSION OF THESE STANDARDS CAN BE ACCESSED AT: https://www.montgomerycountymd.gov/dot-dte/common/standards.html

THE FOLLOWING MARYLAND STATE HIGHWAY DEPARTMENT OF TRANSPORTATION, STATE HIGHWAY ADMINISTRATION STANDARDS (CONSTRUCTION AND TEMPORARY TRAFFIC CONTROL) ARE REQUIRED FOR THIS PROJECT:

MD-655.40 - DETECTABLE WARNING SURFACES

FOR ALL SHA STANDARDS REFERRED TO ON THE PLANS, THE CONTRACTOR MUST GO TO THE BOOK OF STANDARDS WHICH WILL HAVE THE MOST CURRENT VERSION. THE BOOK OF STANDARDS CAN BE ACCESSED AT: http://apps.roads.maryland.gov/businesswithsha/bizStdsSpecs/desManualStdPub/publicationsonline/ohd/bookstd/index.asp

ALL ITEMS ARE TO BE CONSTRUCTED IN ACCORDANCE WITH THE CURRENT VERSION OF THE REFERENCED STANDARD AT THE TIME OF CONSTRUCTION.

PROFESSIONAL CERTIFICATION

I HEREBY CERTIFY THAT THESE DOCUMENTS WERE PREPARED OR APPROVED BY ME, AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MARYLAND.
LICENSE NO. 18589 EXPIRATION DATE 02/10/2024

DATE

MICHAEL ROTHENHEBER, P.E.
MD. REGISTRATION NO. 18589

RELATED REQUIRED PERMITS

To be completed by the consultant and placed on the first sheet of the Sediment Control / Stormwater Management plan set for **all** projects.

IT IS THE RESPONSIBILITY OF PERMITTEE/OWNER OF THIS SITE TO OBTAIN ALL REQUIRED PERMITS PRIOR TO ISSUANCE OF THE APPROVED SEDIMENT CONTROL PERMIT

TYPE OF PERMIT	REQD	NOT REQD	PERMIT #	EXPIRATION DATE	WORK RESTRICTION DATES
MCDPS Floodplain District		X			
WATERWAYS/WETLAND(S):					
a. Corps of Engineers		X			
b. MDE		X			
c. MDE Water Quality Certification		X			
MDE Dam Safety		X			
DNR Roadside Tree Care Permit	X			Approval Date	
DPS Roadside Tree Protection Plan		X		Approval Date	
N.P.D.E.S. NOTICE OF INTENT	X				DATE FILED
OTHERS (Please List):					

JUNE 2014

TREE CANOPY REQUIREMENTS TABLE

To be completed by the consultant and placed on the first sheet of the Sediment Control / Stormwater Management plan set for all projects.

Exempt: Yes ☐ No ☒ If exempt under Section 55-5 of the Code, please check the applicable exemption category below.

Total Property Area	Total Disturbed Area
436,700 square feet	222,156 square feet

Shade Trees Required	Shade Trees Proposed to be Planted
84	0

Fee in Lieu (Trees Required – Trees Planted) x $250	$ 21,000

Required Number of Shade Trees

Area (sq. ft.) of the Limits of Disturbance FROM	TO	Number of Shade Trees Required
1	6,000	3
6,001	8,000	6
8,001	12,000	9
12,001	14,000	12
14,001	40,000	15

If the square footage of the limits of disturbance is more than 40,000, then the number of shade trees required must be calculated using the following formula:

(Number of Square Feet in Limits of Disturbance ÷ 40,000) × 15

EXEMPTION CATEGORIES:

☐ 55-5(a) any activity that is subject to Article II of Chapter 22A;
☐ 55-5(b) any commercial logging or timber harvesting operation with an approved exemption from Article II of Chapter 22A;
☐ 55-5(f) any activity conducted by the County Parks Department;
☐ 55-5(g) routine or emergency maintenance of an existing stormwater management facility, including an existing access road, if the person performing the maintenance has obtained all required permits;
☐ 55-5(h) any stream restoration project if the person performing the work has obtained all necessary permits;
☐ 55-5(i) cutting or clearing any tree to comply with applicable provisions of any federal, state, or local law governing safety of dams;
☐ OTHER: Specify per Section 55-5 of the Code.

MONTGOMERY COUNTY DEPARTMENT OF PERMITTING SERVICES APPROVED FOR:

NOTE: MCDPS APPROVAL DOES NOT NEGATE THE NEED FOR A MDCPS ACCESS PERMIT.

Stormwater Management:

Reviewed Date

Approved Date

SM FILE #

Sediment Control Technical Requirements:

Reviewed Date

Approved Date

Administrative Requirements:

Reviewed Date

SEDIMENT CONTROL PERMIT NO.

MCDPS APPROVAL OF THIS PLAN WILL EXPIRE TWO YEARS FROM THE DATE OF APPROVAL IF THE PROJECT HAS NOT STARTED.

DPS approval of a sediment control or stormwater management plan is for demonstrated compliance with minimum environmental runoff treatment standards and does not create or imply any right to divert or concentrate runoff onto any adjacent property without that property owner's permission. It does not relieve the design engineer or other responsible person of professional liability or ethical responsibility for the adequacy of the drainage design as it affects uphill or downhill properties.

OWNER/ADDRESS:
MONTGOMERY COUNTY DEPARTMENT
OF TRANSPORTATION
100 EDISON PARK DRIVE, 4TH FLOOR
GAITHERSBURG, MD 20878

CONTACT:
ANGEL CHENG, P.E.
PROJECT MANAGER
DESIGN SECTION
DIVISION OF TRANSPORTATION ENGINEERING
240-777-7274

DRAFT
NOT FOR CONSTRUCTION

JMT

NO.	REVISION	DATE	BY

MONTGOMERY COUNTY
DEPARTMENT OF TRANSPORTATION
GAITHERSBURG, MARYLAND

RECOMMENDED FOR APPROVAL

Chief, Design Section — Date

APPROVED

Chief, Division of Transportation Engineering — Date

Designed by: ADH Drawn by: MED Checked by: JJR

GN-01
TITLE SHEET

DALE DRIVE
SHARED USE PATH

0 30' 60'

SCALE: 1"=30' DATE: NOVEMBER 2022

CIP No. : 502109 SHEET 1 of 181

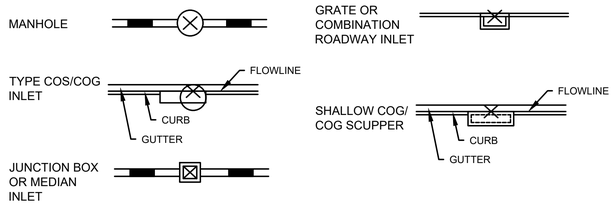
ABBREVIATIONS

A.A.S.H.T.O.	American Association of State Highway Transportation Officials
APPROX.	Approximate
B or B/L	Baseline
C.C.	Center of Curve
C or C/L	Centerline
C.I.P.	Cast Iron Pipe
C.M.P.	Corrugated Metal Pipe
C.O.	Cleanout
COMB.	Combination
CONC.	Concrete
CONSTR.	Construction
C.P.P.	Corrugated Polyethylene Pipe
D.B.H.	Diameter Breast Height
DC	Degree of Curve
D.H.V.	Design Hour Volume
D.I.	Drop Inlet
DIA.	Diameter
D.O.	Double Opening
E	East
E	Electric
E	External Distance
EA.	Each
E.B.	Eastbound
ELEV.	Elevation
E.R.C.C.P.	Elliptical Reinforced Cement Concrete Pipe
ES	End Section
EX. or EXIST.	Existing
FT	Feet
F or FL	Flowline
FWD	Forward
G	Gas
H.D.P.E.	High-Density Polyethylene
H.E.R.C.P.	Horizontal Elliptical Reinforced Concrete Pipe
HP	Hight Point
HMA	Hot Mix Asphalt
HT	Height
IN	Inch
INV	Invert
L	Length
LANDSC.	Landscaped
L.F.	Linear Feet
LP	Low Point
LT	Left
MAX.	Maximum
MOD.	Modified
MIN.	Minimum
N	North
NB	Northbound
NE	Northeast
N.T.S.	Not To Scale
O.C.	On Center
P.C.	Point of Curvature
P.C.C.	Point of Compound Curve
P/C	Point of Grown
PGA	Point of Grade Application
P/GE	Profile Grade Elevation
P.G.E.	Profile Ground Elevation
P.G.L.	Profile Grade Line
P/GL	Profile Ground Line
P/R	Point of Rotation
P.I.	Point of Intersection
P.O.C.	Point on Curve
P.O.T.	Point on Tangent
PROP.	Proposed
PT.	Point
P.T.	Point of Tangency
P.V.C.	Point of Vertical Curve
PVC	Polyvinyl Chloride
PVI	Point of Intersection
R	Radius
RET. WALL	Retaining Wall
RT	Right
RW or R/W	Right of Way
R.C.P.	Reinforced Cement Pipe
R.C.C.P.	Reinforced Cement Concrete Pipe
S	South
SAN.	Sanitary Sewer
SB	Southbound
S.D.	Storm Drain
S.E.	Superelevation
SF	Silt Fence
S.F.	Square Feet
SSD	Stopping Sight Distance
SSF	Super Silt Fence
STD.	Standard
SO.	Single Opening
S.Y.	Square Yards
SWM	Stormwater Management
SW	Sidewalk
T	Tangent
T	Telephone
T.C.P.	Terra Cotta Pipe
TYP.	Typical
U.P.	Utility Pole
VAR.	Varies
V.C.L.	Vertical Curve Length
W	Water
W	West
WB	Westbound

LEGEND

	SIGN		HEDGE/BUSHES
MB	MAIL BOX	434.0	SPOT ELEVATION
FP	FLAG POLE	II	WOOD FENCE
LL	LANDSCAPE LIGHTING	XXXXXXXXXXXXX	WIRE FENCE / CHAIN LINK FENCE
	LIGHT POST		STREAM
	UTILITY POLE		INDEX CONTOUR
	GUY WIRE ANCHOR	430	INTERVAL CONTOUR
	GUY POLE	OHW	OVERHEAD WIRES
GV	GAS VALVE		ABANDONED GAS LINE
	WATER VALVE	G	EXISTING GAS LINE
W	WATER METER		PROPERTY LINE
	FIRE HYDRANT		EXISTING RIGHT OF WAY
SS	SANITARY MANHOLE	F	TOE OF FILL
D	STORM DRAIN MANHOLE	C	TOP OF CUT
	DECIDUOUS TREE		GUARDRAIL W-BEAM
		LOD	LIMIT OF DISTURBANCE
	CONIFER TREE	TCE	TEMPORARY CONSTRUCTION EASEMENT
	BUSH	RSE	REVERTIBLE SLOPE EASEMENT
		PE	PERPETUAL EASEMENT

DRAINAGE STRUCTURE STAKEOUT LOCATIONS



DRAINAGE BUBBLES

INLET ---------- I / 1

MANHOLE ---------- MH / 1

JUNCTION BOX ---------- JB / 1

FIELD CONNECTION ---------- C / 1

DRAFT
NOT FOR CONSTRUCTION

NO.	REVISION	DATE	BY

MONTGOMERY COUNTY
DEPARTMENT OF TRANSPORTATION
GAITHERSBURG, MARYLAND

RECOMMENDED FOR APPROVAL

Chief, Design Section — Date

APPROVED

Chief, Division of Transportation Engineering — Date

Designed by: ADH Drawn by: ADH Checked by: JJR

GN-02
ABBREVIATIONS AND SYMBOLS

DALE DRIVE
SHARED USE PATH

0 30' 60'
SCALE: 1"=30'

DATE: NOVEMBER 2022

CIP No. : 502109

SHEET 2 of 181

GENERAL NOTES

1. THE SPECIFICATIONS FOR THIS CONTRACT WILL BE THOSE OF THE MARYLAND STATE HIGHWAY ADMINISTRATION DATED JULY 2022, ALL ERRATA AND ADDENDA THERETO, THE MARYLAND STATE HIGHWAY ADMINISTRATION BOOK OF STANDARDS FOR HIGHWAY AND INCIDENTAL STRUCTURES, WASHINGTON SUBURBAN SANITARY COMMISSION (W.S.S.C.) STANDARDS, MONTGOMERY COUNTY DEPARTMENT OF TRANSPORTATION STANDARDS, AND SOIL CONSERVATION SERVICE POND CONSTRUCTION SPECIFICATIONS FOR MARYLAND.
2. FOR CONSTRUCTION, ALL HORIZONTAL SHALL BE BASED ON NAD 83/91, NAVD 88 DATUM.
3. TYPES OF STORM DRAIN STRUCTURES REFER TO THE "DESIGN STANDARDS" OF MONTGOMERY COUNTY DEPARTMENT OF TRANSPORTATION, UNLESS OTHERWISE NOTED.
4. WHEN THE DROP ON THE MAIN LINE THROUGH A STORM DRAIN STRUCTURE CAN BE ACCOMMODATED BY AN INVERT SLOPE OF 1.5:1 OR FLATTER, A ROUNDED CHANNEL LINED WITH SEWER BRICK ON EDGE SHALL BE BUILT TO THE CROWN OF THE PIPES. WHEN THE INVERT SLOPES WOULD BE GREATER THAN 1.5:1 A SPECIAL INVERT SHALL BE CONSTRUCTED AS NOTED.
5. ALL STORM DRAIN PIPE SHALL BE INSTALLED WITH CLASS "C" BEDDING UNLESS OTHERWISE SPECIFIED.
6. THE CONTRACTOR SHALL MAKE FIELD ADJUSTMENTS TO STORM DRAIN STRUCTURES, WHEN NECESSARY, TO MEET EXISTING CONDITIONS, AS APPROVED BY MONTGOMERY COUNTY DEPARTMENT OF TRANSPORTATION'S PROJECT INSPECTOR.
7. INFORMATION CONCERNING UNDERGROUND UTILITIES WAS OBTAINED FROM AVAILABLE RECORDS, BUT THE CONTRACTOR MUST DETERMINE THE EXACT LOCATIONS AND ELEVATIONS OF THE LINES BY DIGGING TEST PITS BY HAND AT ALL UTILITY CROSSINGS, WELL IN ADVANCE OF TRENCHING. IF CLEARANCES ARE LESS THAN SHOWN OR SIX (6) INCHES, WHICHEVER IS LESS, CONTACT MONTGOMERY COUNTY DEPARTMENT OF TRANSPORTATION'S PROJECT INSPECTOR AND THE APPROPRIATE UTILITY OWNER BEFORE PROCEEDING WITH CONSTRUCTION.
8. REPAIRS TO UTILITIES OR PROPERTY DAMAGE AS A RESULT OF THE CONTRACTOR'S NEGLIGENCE OR METHOD OF OPERATION MUST BE MADE AT THE CONTRACTOR'S EXPENSE BEFORE PROCEEDING WITH CONSTRUCTION.
9. CALL "MISS UTILITY" AT 1-800-257-7777 FORTY-EIGHT (48) HOURS PRIOR TO BEGINNING EXCAVATION TO DETERMINE THE EXACT LOCATION OF EXISTING UTILITIES.
10. CLEARING IS TO BE LIMITED TO THE "LIMIT OF GRADING" AS SHOWN ON THE PLANS.
11. ALL GRADING SHALL BE DONE IN SUCH A MANNER AS TO PROVIDE POSITIVE DRAINAGE.
12. DISTURBED AREAS ADJACENT TO ESTABLISHED LAWNS SHALL BE SODDED. OTHER DISTURBED AREAS SHALL BE SEEDED AND MULCHED.
13. THE CONTRACTOR SHALL MAINTAIN THE APPROVED ROADSIDE TREE PERMIT FOR ANY MAINTENANCE, TREATMENT, PLANTING, REMOVAL, OR ROOT CUTTING ON TREES WITHIN THE PUBLIC RIGHT OF WAY. PERMIT REQUIREMENTS MAY BE OBTAINED FROM THE DEPARTMENT OF NATURAL RESOURCES, MARYLAND FOREST, PARK AND WILDLIFE SERVICE, TELEPHONE 301-854-6060
14. THE LOCATION OF RIGHT-OF-WAY AND EASEMENT LINES SHOWN ON THE PLANS ARE FOR INFORMATION AND GUIDANCE ONLY. NO GUARANTEE IS MADE AS TO THE ACCURACY OF SAID LOCATIONS. PLEASE REFER TO THE APPROPRIATE RIGHT-OF-WAY PLATS.
15. ALL UTILITY POLES AND GUY WIRES NOTED FOR RELOCATION SHALL BE PERFORMED BY OTHERS.
16. CONTACT THE WASHINGTON SUBURBAN SANITARY COMMISSION SYSTEM MAINTENANCE ENGINEER BEFORE EXCAVATING BENEATH OR IN THE VICINITY OF EXISTING WATER OR SEWER LINES. BACKFILL TO BE DONE UNDER SUPERVISION OF W.S.S.C. CALL 301-699-4420
17. THE CONTRACTOR SHALL INSTALL PEDESTRIAN DETECTABLE WARNING SURFACES AT ALL SIDEWALK & PEDESTRIAN CROSSINGS. LOCATIONS AS DIRECTED BY THE ENGINEER. THE WARNING SURFACES SHALL BE IN CONFORMANCE WITH ADA REQUIREMENTS AND THE PROJECT SPECIAL PROVISION.
18. THE CONTRACTOR SHALL BE AWARE THAT OVERHEAD UTILITY WIRES EXIST WITHIN THE PROJECT SITE. LOCATIONS OF WIRES SHOULD BE NOTED IN FIELD WITH SIGNAGE TO AVOID CONFLICTS DURING CONSTRUCTION.

M-NCPPC NOTES

1. A PRE-CONSTRUCTION MEETING MUST BE HELD PRIOR TO START OF WORK WITH A MINIMUM OF 72 HOURS PRIOR NOTICE. THE M-NCPPC PARK MANAGER, PARK INSPECTOR, AND PARK URBAN FORESTER SHALL BE REPRESENTED AT THE MEETING.
2. M-NCPPC RESERVES THE RIGHT TO ADJUST AND MODIFY THE LIMITS OF DISTURBANCE (LOD) IN THE FIELD TO MINIMIZE IMPACTS OF WORK.
3. NO CLEARING, GRUBBING, OR GRADING SHALL COMMENCE UNTIL THE LOD ARE STAKED IN THE FIELD AND ARE APPROVED BY THE PARK INSPECTOR AS WELL AS ANY OTHER APPLICABLE PERMITTING AGENCIES. AFTER THE LOD IS APPROVED, NO DISTURBANCE WILL BE ALLOWED OUTSIDE OF THE APPROVED LIMITS. ANY ITEMS DISTURBED OUTSIDE OF THE APPROVED LIMITS WILL BE REPLACED AT THE CONTRACTOR'S EXPENSE.
4. CONTRACTOR SHALL BE SOLELY RESPONSIBLE FOR IDENTIFYING THE LOCATION OF ALL EXISTING UTILITIES PRIOR TO START OF THE CONSTRUCTION RELATED WORK AND SHALL COORDINATE THE WORK WITH PARK INSPECTOR. THE CONTRACTOR SHALL MAINTAIN PROPER CLEARANCES BETWEEN ALL EXISTING AND PROPOSED UTILITIES AT ALL TIMES AS REQUIRED BY THE UTILITY COMPANIES. ANY COST ASSOCIATED WITH THE REPAIR OR REPLACEMENT OF UTILITIES DAMAGED BY THE CONTRACTOR SHALL BE THE SOLE RESPONSIBILITY OF THE CONTRACTOR. ANY DAMAGE MADE TO THE UTILITY SHALL BE REPAIRED ON AN EMERGENCY BASIS PER THE LATEST SPECIFICATIONS OF THE CONCERNED UTILITY AND COMPLETED WORK SHALL BE APPROVED BY THE CONCERNED UTILITY. ANY DAMAGE SHALL BE DOCUMENTED IMMEDIATELY AND REPORTED TO THE PARK INSPECTOR.
5. THE ENTIRE LOD SHALL BE FENCED AS DIRECTED BY THE PARK INSPECTOR. WHERE SILT FENCE, SUPER SILT FENCE, OR TREE PROTECTION FENCE IS NOT REQUIRED, ORANGE BLAZE SAFETY FENCE MAY BE USED.
6. CONTRACTOR SHALL BE RESPONSIBLE FOR MAINTAINING SAFE FACILITY ACCESS THROUGHOUT CONSTRUCTION AND PROVIDE ANY APPROPRIATE DETOURS, TEMPORARY FACILITIES, AND SIGNAGE AS REQUESTED BY THE PARK MANAGER.
7. SITE RESTORATION AND REPAIR/REPLACEMENT OF DAMAGED INFRASTRUCTURE SHALL BE IN ACCORDANCE WITH M-NCPPC DETAILS, STANDARDS, AND SPECIFICATIONS AT THE DIRECTION OF THE PARK INSPECTOR AT NO COST TO M-NCPPC. SITE RESTORATION IS TO BE ACHIEVED TO THE SATISFACTION OF THE PARK INSPECTOR PRIOR TO DEMOBILIZATION.
8. STAGING AREAS AND ACCESS ROUTES SHALL BE DETERMINED IN FIELD AND APPROVED BY THE PARK INSPECTOR TO MINIMIZE IMPACTS.
9. EQUIPMENT RESTRICTIONS (E.G. 8 P.S.I. OR LESS) MAY BE REQUIRED BY M-NCPPC IN SENSITIVE AREAS.
10. THE CONTRACTOR SHALL COORDINATE WITH MONTGOMERY COUNTY DEPARTMENT OF PERMITTING SERVICES INSPECTOR AND/OR PARK INSPECTOR ON THE USE OF TRENCHLESS SILT FENCES AND/OR DAILY STABILIZATION TO AVOID CUTTING THROUGH MATURE TREES. WHERE TRENCHING IS REQUIRED, ROOT PRUNE PRIOR TO EXCAVATION FOR TRENCH AT THE DIRECTION OF THE PARK URBAN FORESTER.
11. SPECIAL PROTECTION MEASURES SHALL BE PROVIDED AS DIRECTED IN THE FIELD DURING CONSTRUCTION BY PARK INSPECTOR OR PARK URBAN FORESTER. THESE MAY INCLUDE, BUT NOT BE LIMITED TO, ROOT PRUNING, 12-INCH THICK MULCH LAYER ACCESS BEDDING, HARDWOOD MATS, ADDITIONAL TREE PROTECTION FENCING, TREE PLANKING, AND ADDITIONAL SEDIMENT CONTROLS.
12. TREE PROTECTION FENCING SHOULD BE 14-GAUGE WELDED WIRE TYPE (WITH METAL STAKES AT 10 FEET O.C.) AND MUST BE MAINTAINED THROUGHOUT CONSTRUCTION. TREE SAVE AREA SIGNAGE SHOULD BE POSTED EVERY 30 FEET ALONG FENCING. TREE PROTECTION FENCE SHOULD BE INSTALLED BY THE CONTRACTOR AND INSPECTED BY THE M-NCPPC PARK URBAN FORESTER PRIOR TO THE START OF CONSTRUCTION.
13. M-NCPPC MAY INSPECT CONDITION OF TREES THROUGHOUT CONSTRUCTION AND REQUIRE REPAIR, REMOVAL, AND/OR REPLACEMENT OF ANY DAMAGED TREES AT NO COST TO M-NCPPC. TREES TO BE REMOVED ARE INDICATED WITH AN "X". NO OTHER TREES LARGER THAN 6" DBH SHALL BE DAMAGED OR REMOVED DURING CONSTRUCTION UNLESS APPROVED BY PARK URBAN FORESTER.
14. ALL PLANTING SUBSTITUTIONS MUST BE APPROVED BY PARK URBAN FORESTER. PLANT MATERIALS AND LOCATIONS SHOULD BE INSPECTED BY PARK URBAN FORESTER PRIOR TO INSTALLATION.
15. CONTRACTOR SHALL PROVIDE 4-FOOT HIGH (1-FOOT MINIMUM DIAMETER) 14-GAUGE WELDED WIRE DEER PROTECTION CAGES WITH MINIMUM OF ONE SUPPORT STAKE (OR TO CURRENT M-NCPPC SPECIFICATIONS) FOR ALL LANDSCAPE AND REFORESTATION TREES AND SHRUBS TO PREVENT DAMAGE BY DEER. TUBEX SHALL NOT BE USED AS A SUBSTITUTE.
16. NOTES AND DETAILS SHOWN ON THE DRAWINGS ARE TYPICAL UNLESS OTHERWISE SHOWN OR NOTED.

EARTHWORK SUMMARY

			PROPOSAL QUANTITY
CLASS I EXCAVATION			
CUT (FROM CROSS SECTIONS)	4,826	CY	
PAVEMENT REMOVAL	2,875	CY	
TOPSOIL UNDER FILL	–	CY	
ROOT MAT UNDER FILL	–	CY	
PLUS CUT (FROM SWM AREA)	–	CY	
TOTAL CLASS I EXCAVATION	7,701	CY	7,701 CY
CLASS IA EXCAVATION (ESTIMATED)			
MUCK REMOVAL (IF ANY)	–	CY	
UNDERCUTTING	–	CY	
TOTAL CLASS IA EXCAVATION	–	CY	– CY
CLASS 2 EXCAVATION			
CUT (FROM CROSS SECTIONS)	–	CY	
TOTAL CLASS 2 EXCAVATION	–	CY	– CY
EXCAVATION AVAILABLE FOR EMBANKMENT			
TOTAL CLASS I EXCAVATION + CLASS 2 EXCAVATION	7,701	CY	
MINUS:			
TOPSOIL (REMOVED IN CUT)	–	CY	
TOPSOIL (REMOVED UNDER FILL)	–	CY	
ROOT MAT (REMOVED IN CUT)	–	CY	
ROOT MAT (REMOVED IN FILL)	–	CY	
CUT ADJUSTED	7,701	CY	
CUT DENSIFIED (x 0.83)	6,392	CY	
TOTAL EXCAVATION AVAILABLE FOR EMBANKMENT	6,392	CY	
EMBANKMENT REQUIRED			
FILL (FROM CROSS SECTIONS)	677	CY	
REFILL FOR TOPSOIL UNDER FILL	–	CY	
REFILL FOR ROOT MAT UNDER FILL	–	CY	
FILL (FROM SWM AREA)	–	CY	
TOTAL	677	CY	
MINUS EXCAVATION AVAILABLE FOR EMBANKMENT	(5,715)	CY	
ADJUSTED TOTAL	0	CY	
PLUS DENSIFICATION FACTOR (x 1.20)	0	CY	
MINUS SELECT BORROW	–	CY	
COMMON BORROW	0	CY	0 CY
SELECT BORROW	–	CY	– CY

DRAFT
NOT FOR CONSTRUCTION

JMT

NO.	REVISION	DATE	BY

MONTGOMERY COUNTY
DEPARTMENT OF TRANSPORTATION
GAITHERSBURG, MARYLAND

RECOMMENDED FOR APPROVAL

Chief, Design Section — Date

APPROVED

Chief, Division of Transportation Engineering — Date

Designed by: ADH Drawn by: ADH Checked by: JJR

GN-03
GENERAL NOTES

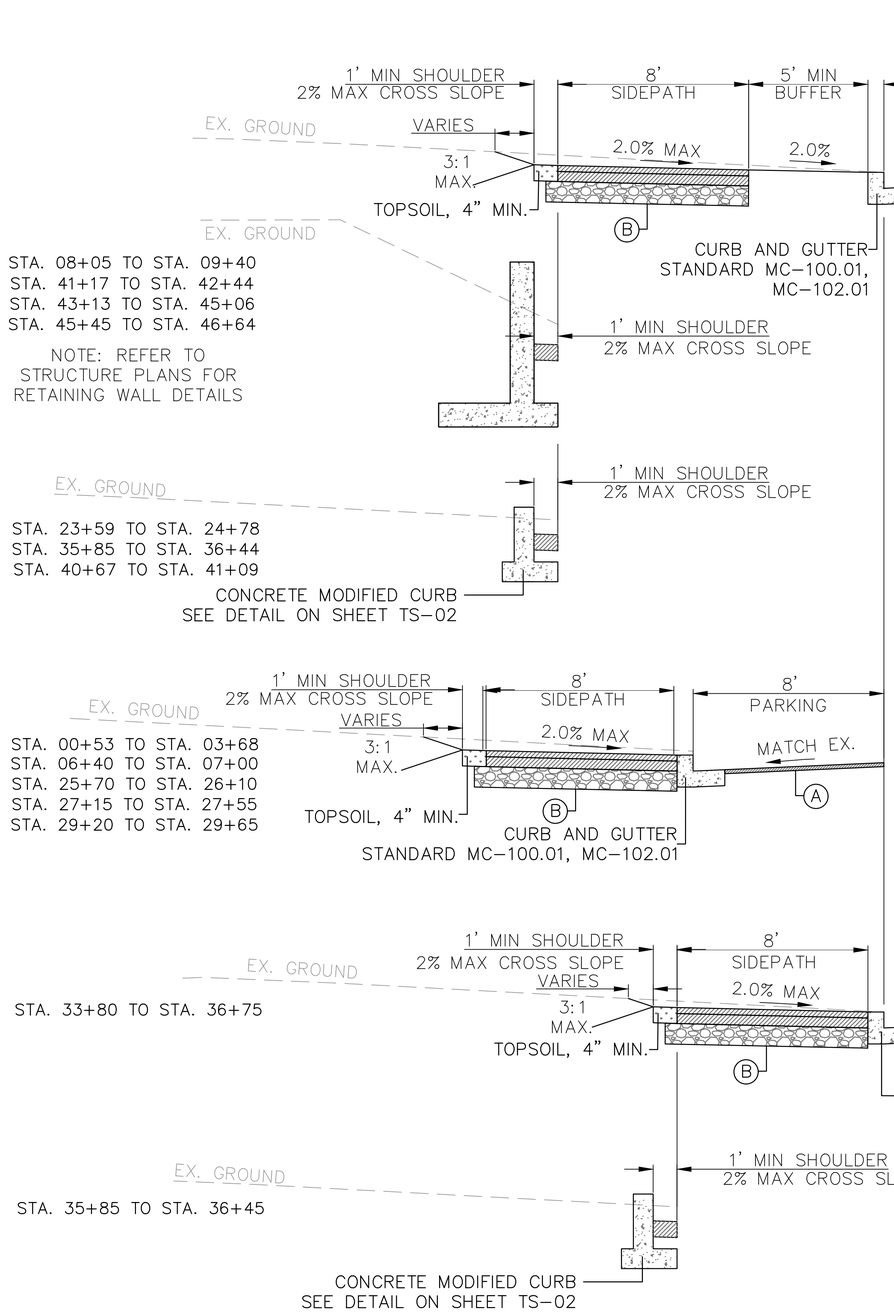
DALE DRIVE
SHARED USE PATH

0 30' 60'
SCALE: 1"=30'

DATE: NOVEMBER 2022

CIP No. : 502109

SHEET 3 of 181



NOTES:
1. MAXIMUM ALLOWABLE TRAIL CROSS SLOPE IS 2.0% MAX. FOR ADA COMPLIANCE, WITH ZERO CONSTRUCTION TOLERANCE TO EXCEED 2.0%.
2. IMPERVIOUS TRAIL PAVEMENT DETAIL REFLECTS A DEVIATION FROM THE PAVEMENT SECTION SHOWN ON M-NCPPC STANDARD TRAIL DETAILS. THIS CHANGE HAS BEEN APPROVED BY MONTGOMERY COUNTY AND M-NCPPC.

DRAFT
NOT FOR CONSTRUCTION

NO.	REVISION	DATE	BY

MONTGOMERY COUNTY
DEPARTMENT OF TRANSPORTATION
GAITHERSBURG, MARYLAND

RECOMMENDED FOR APPROVAL

Chief, Design Section — Date

APPROVED

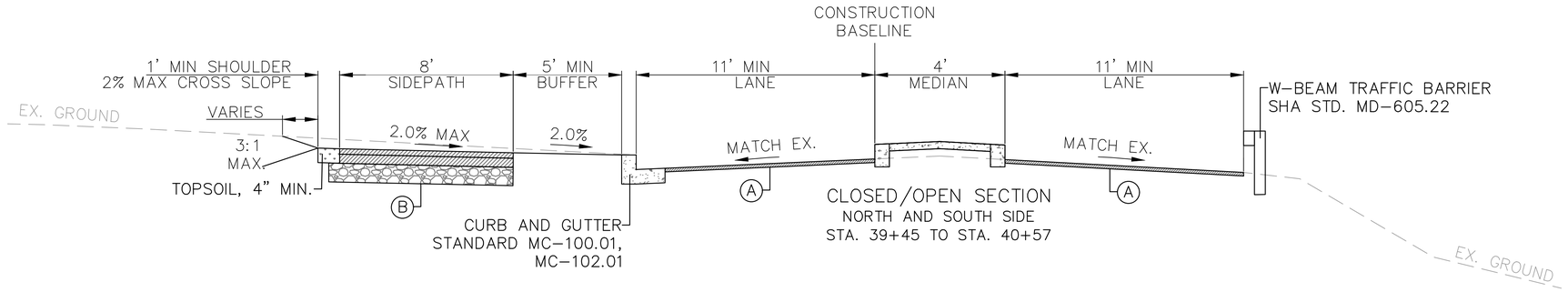
Chief, Division of Transportation Engineering — Date

Designed by: ADH Drawn by: MED Checked by: JJR

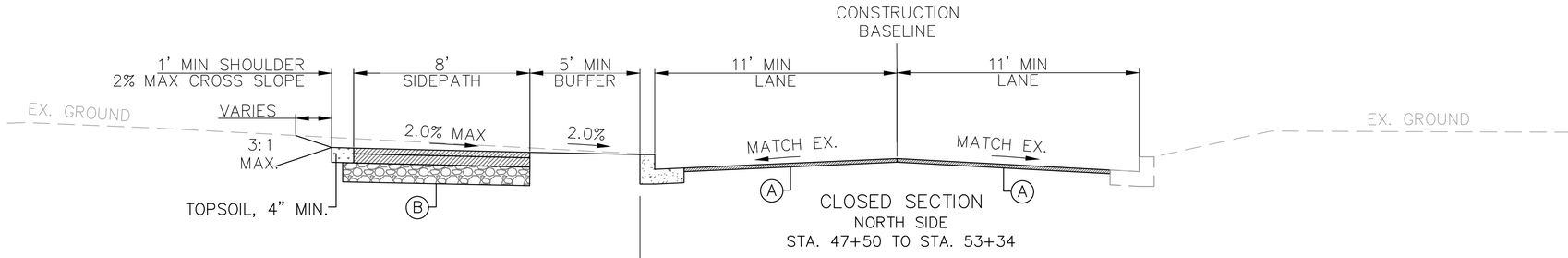
TS-01
TYPICAL SECTION
DALE DRIVE
SHARED USE PATH

0 30' 60'
SCALE: 1"=30'
DATE: NOVEMBER 2022

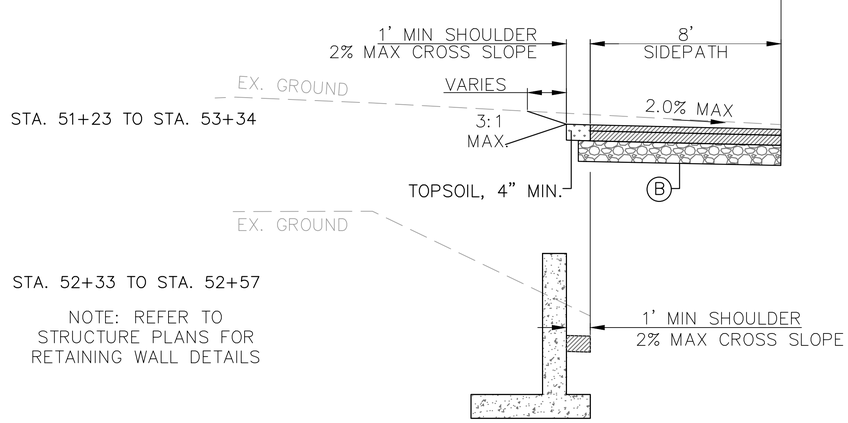
CIP No. : 502109
SHEET 4 of 181



CLOSED/OPEN SECTION
NORTH AND SOUTH SIDE
STA. 39+45 TO STA. 40+57



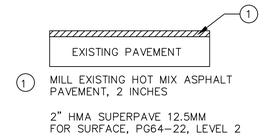
CLOSED SECTION
NORTH SIDE
STA. 47+50 TO STA. 53+34



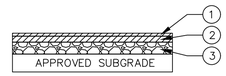
STA. 51+23 TO STA. 53+34

STA. 52+33 TO STA. 52+57

NOTE: REFER TO STRUCTURE PLANS FOR RETAINING WALL DETAILS

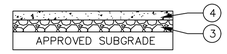


Ⓐ MILL/OVERLAY DETAIL
NTS



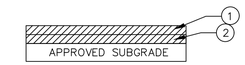
1. 1.5" HMA SUPERPAVE 12.5MM FOR SURFACE, PG64-22, LEVEL-2
2. 2.5" HMA SUPERPAVE 19.0MM FOR BASE, PG64-22, LEVEL-2
3. 5" CR-6 GRADED AGGREGATE BASE COURSE

Ⓑ HMA TRAIL PAVEMENT DETAIL
NTS



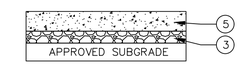
4. 4" CONCRETE SIDEWALK
3. 4" CR-6 GRADED AGGREGATE BASE COURSE

Ⓒ CONCRETE SIDEWALK DETAIL
NTS



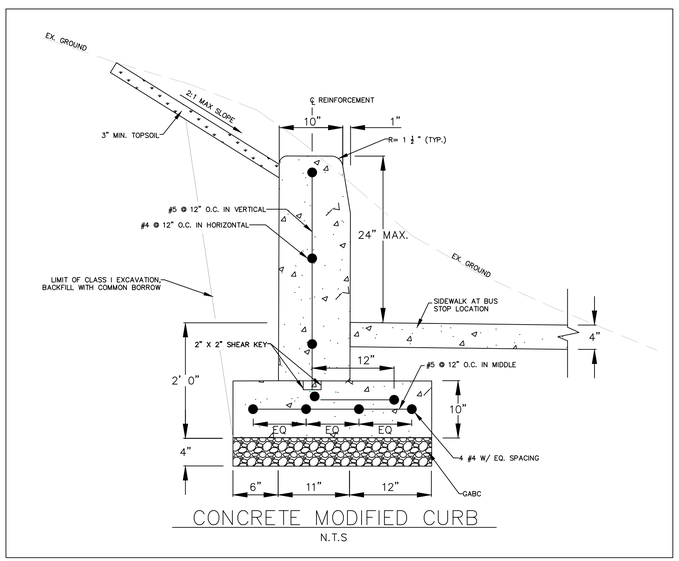
1. 3" HMA SUPERPAVE 12.5MM FOR SURFACE, PG64-22, LEVEL 2
2. 3" HMA SUPERPAVE 19.0MM FOR BASE, PG64-22, LEVEL 2

HMA DRIVEWAY DETAIL
NTS



5. 7" PORTLAND CEMENT CONCRETE
3. 4" CR-6 GRADED AGGREGATE BASE COURSE

CONCRETE DRIVEWAY DETAIL
NTS



CONCRETE MODIFIED CURB
N.T.S

NOTES:
1. MAXIMUM ALLOWABLE TRAIL CROSS SLOPE IS 2.0% MAX. FOR ADA COMPLIANCE, WITH ZERO CONSTRUCTION TOLERANCE TO EXCEED 2.0%.
2. HMA TRAIL PAVEMENT DETAIL REFLECTS A DEVIATION FROM THE PAVEMENT SECTION SHOWN ON M-NCPPC STANDARD TRAIL DETAILS. THIS CHANGE HAS BEEN APPROVED BY MONTGOMERY COUNTY AND M-NCPPC.

DRAFT
NOT FOR CONSTRUCTION

NO.	REVISION	DATE	BY

MONTGOMERY COUNTY
DEPARTMENT OF TRANSPORTATION
GAITHERSBURG, MARYLAND

RECOMMENDED FOR APPROVAL

Chief, Design Section — Date

APPROVED

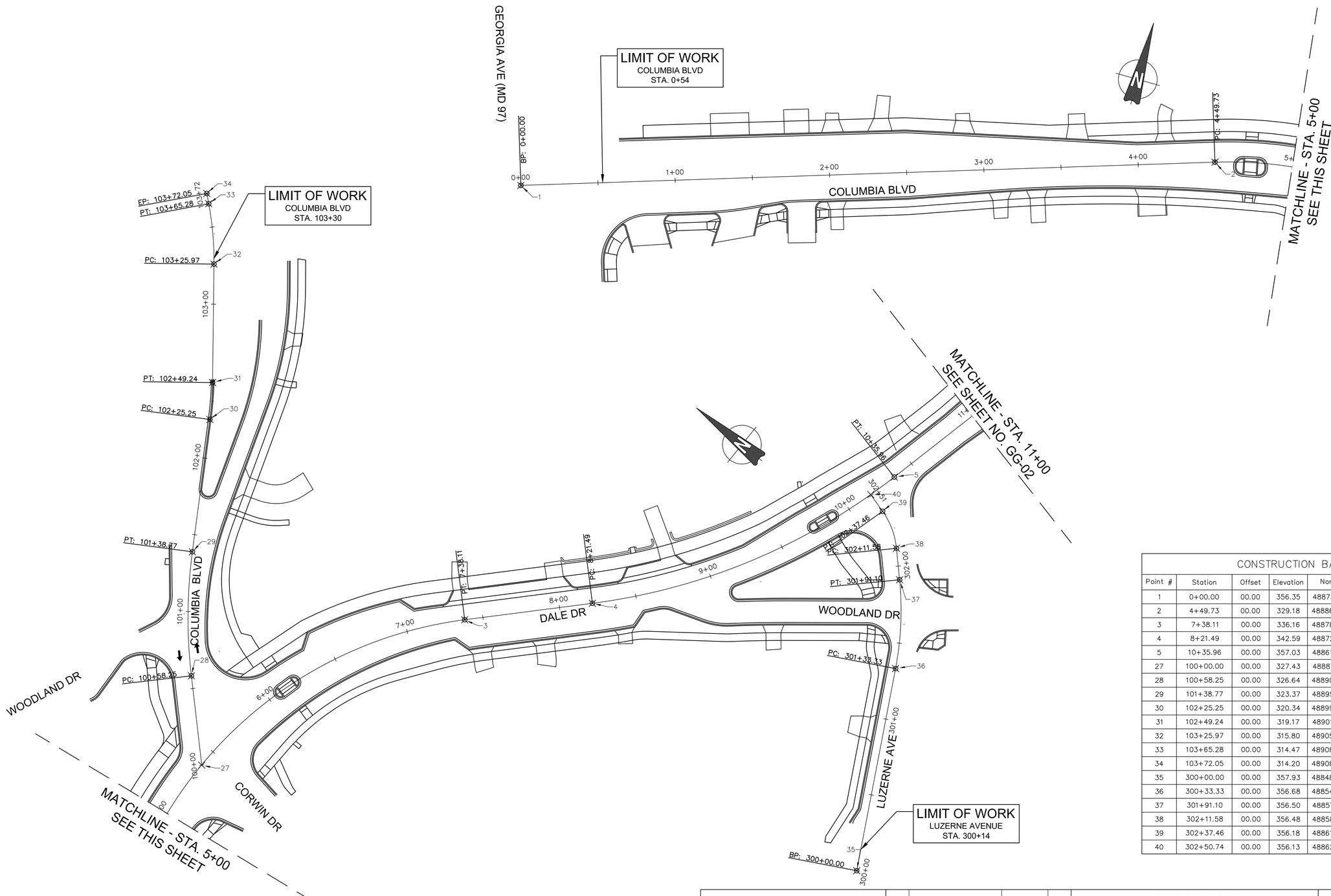
Chief, Division of Transportation Engineering — Date

Designed by: ADH Drawn by: ADH Checked by: JJR

TS-02
TYPICAL SECTION
DALE DRIVE SHARED USE PATH

0 30' 60'
SCALE: 1"=30'
DATE: NOVEMBER 2022

CIP No. : 502109
SHEET 5 of 181



CONSTRUCTION BASELINE

Point #	Station	Offset	Elevation	Northing	Easting	Description
1	0+00.00	00.00	356.35	488738.8451	1300900.4368	POB
2	4+49.73	00.00	329.18	488860.8924	1301333.2940	PC
3	7+38.11	00.00	336.16	488787.9026	1301597.7629	PT
4	8+21.49	00.00	342.59	488727.3155	1301655.0497	PC
5	10+35.96	00.00	357.03	488617.4047	1301836.2203	PT
27	100+00.00	00.00	327.43	488870.1612	1301421.3931	BOP
28	100+58.25	00.00	326.64	488909.6630	1301464.2049	PC
29	101+38.77	00.00	323.37	488956.4154	1301529.5090	PT
30	102+25.25	00.00	320.34	488997.6832	1301605.5086	PC
31	102+49.24	00.00	319.17	489010.3656	1301625.8536	PT
32	103+25.97	00.00	315.80	489054.7873	1301688.4208	PC
33	103+65.28	00.00	314.47	489080.5375	1301718.0380	PT
34	103+72.05	00.00	314.20	489085.4542	1301722.6817	POE
35	300+00.00	00.00	357.93	488486.9848	1301615.7624	POB
36	300+33.33	00.00	356.68	488543.7265	1301736.4165	PC
37	301+91.10	00.00	356.50	488575.4719	1301784.4470	PT
38	302+11.58	00.00	356.48	488589.1023	1301799.7250	PC
39	302+37.46	00.00	356.18	488610.4578	1301813.8251	PT
40	302+50.74	00.00	356.13	488623.0417	1301818.0619	POE

DRAFT
NOT FOR CONSTRUCTION

JMT

NO.	REVISION	DATE	BY

MONTGOMERY COUNTY
DEPARTMENT OF TRANSPORTATION
GAITHERSBURG, MARYLAND

RECOMMENDED FOR APPROVAL

Chief, Design Section — Date

APPROVED

Chief, Division of Transportation Engineering — Date

Designed by: ADH Drawn by: MED Checked by: JJR

GG-01
GRADES AND GEOMETRICS
DALE DRIVE
SHARED USE PATH

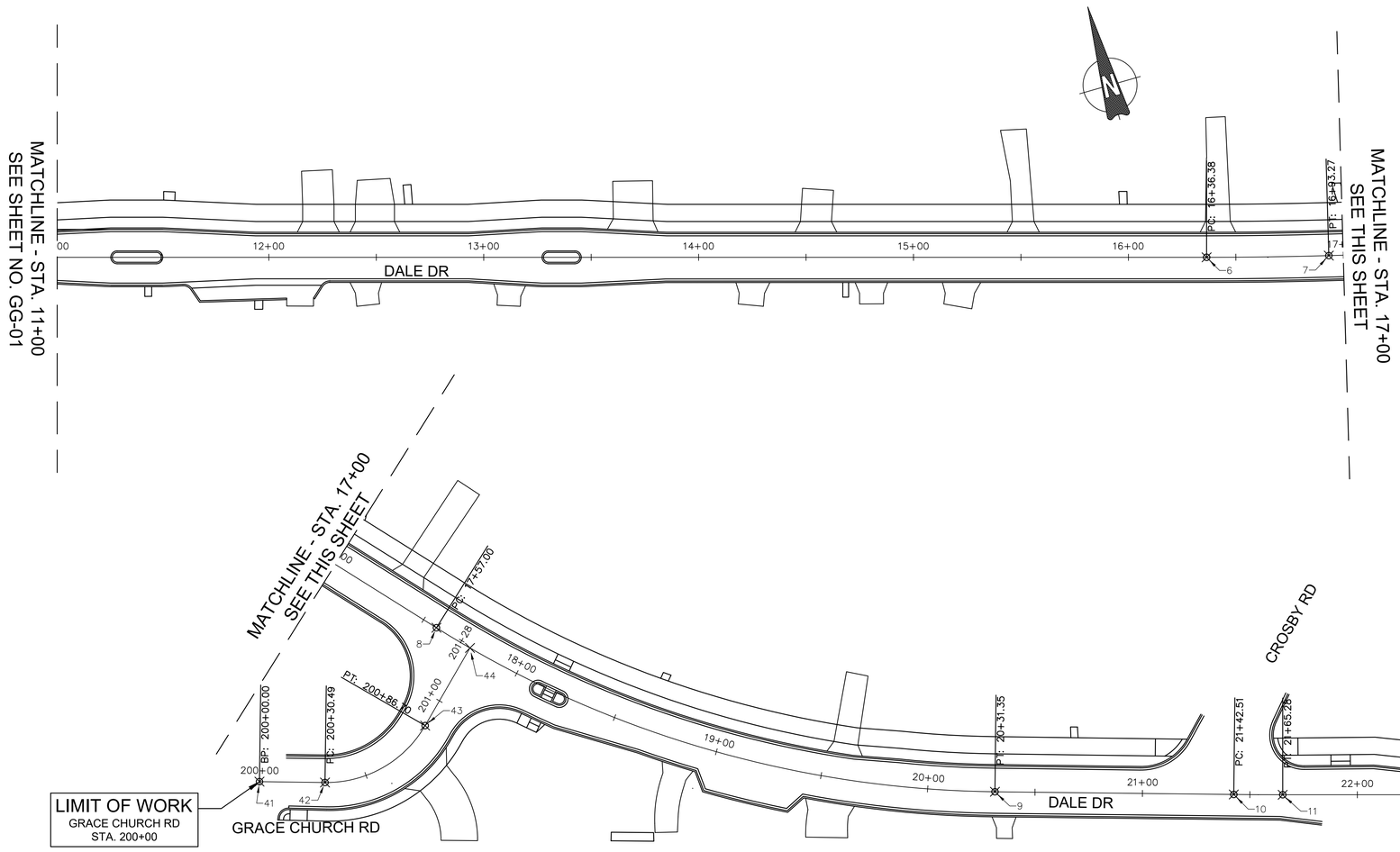
0 30' 60'
SCALE: 1"=30'

DATE: NOVEMBER 2022

CIP No.: 502109

SHEET 6 of 181

FILE NAME: Q:\2018\1804565_001_Dale_Drive_Pedestria\CADD\pGG_Dale.dwg LAYOUT NAME: GG-01 PLOTTED: Tuesday, November 22, 2022 - 6:58pm USER: AHavener



CONSTRUCTION BASELINE						
Point #	Station	Offset	Elevation	Northing	Easting	Description
6	16+36.38	00.00	335.28	488453.0720	1302413.7213	PC
7	16+93.27	00.00	331.10	488438.2820	1302468.6527	PT
8	17+57.00	00.00	326.41	488422.5894	1302530.4223	PC
9	20+31.35	00.00	309.83	488429.5137	1302801.2523	PT
10	20+31.35	00.00	309.93	488462.3528	1302907.4466	PC
11	21+65.28	00.00	310.37	488469.2031	1302929.1604	PT
41	200+00.00	00.00	322.98	488329.1679	1302473.9932	POB
42	200+30.49	00.00	321.95	488338.1239	1302503.1422	PC
43	200+86.70	00.00	321.33	488377.6189	1302539.3861	PT
44	201+28.43	00.00	325.16	488418.4212	1302548.1810	POE

DRAFT
NOT FOR CONSTRUCTION

NO.	REVISION	DATE	BY

MONTGOMERY COUNTY
DEPARTMENT OF TRANSPORTATION
GAITHERSBURG, MARYLAND

RECOMMENDED FOR APPROVAL

Chief, Design Section — Date

APPROVED

Chief, Division of Transportation Engineering — Date

Designed by: ADH Drawn by: MED Checked by: JJR

GG-02
GRADES AND GEOMETRICS
DALE DRIVE
SHARED USE PATH

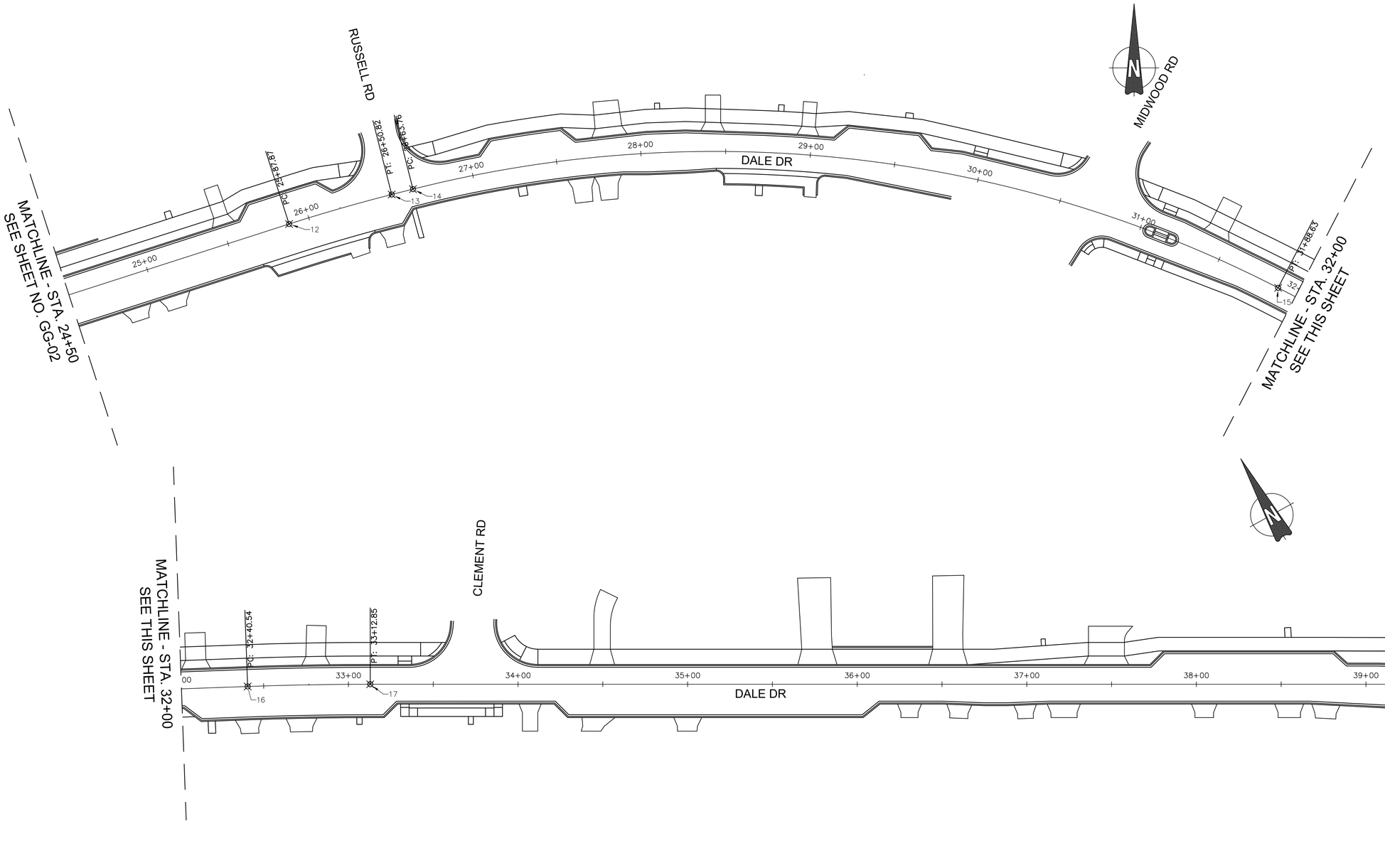
0 30' 60'

SCALE: 1"=30'

DATE: NOVEMBER 2022

CIP No.: 502109

SHEET 7 of 181



CONSTRUCTION BASELINE						
Point #	Station	Offset	Elevation	Northing	Easting	Description
12	25+87.87	00.00	328.09	488598.6385	1303331.4416	PC
13	26+50.82	00.00	328.61	488616.0213	1303391.9334	PT
14	26+63.76	00.00	328.48	488619.2021	1303404.4772	PC
15	31+88.63	00.00	316.15	488560.9742	1303914.6538	PT
16	32+40.54	00.00	320.15	488537.2079	1303960.7964	PC
17	33+12.85	00.00	325.23	488502.9437	1304024.4664	PT

DRAFT
NOT FOR CONSTRUCTION

NO.	REVISION	DATE	BY

MONTGOMERY COUNTY
DEPARTMENT OF TRANSPORTATION
GAITHERSBURG, MARYLAND

RECOMMENDED FOR APPROVAL

Chief, Design Section — Date

APPROVED

Chief, Division of Transportation Engineering — Date

Designed by: ADH Drawn by: MED Checked by: JJR

GG-03
GRADES AND GEOMETRICS

DALE DRIVE
SHARED USE PATH

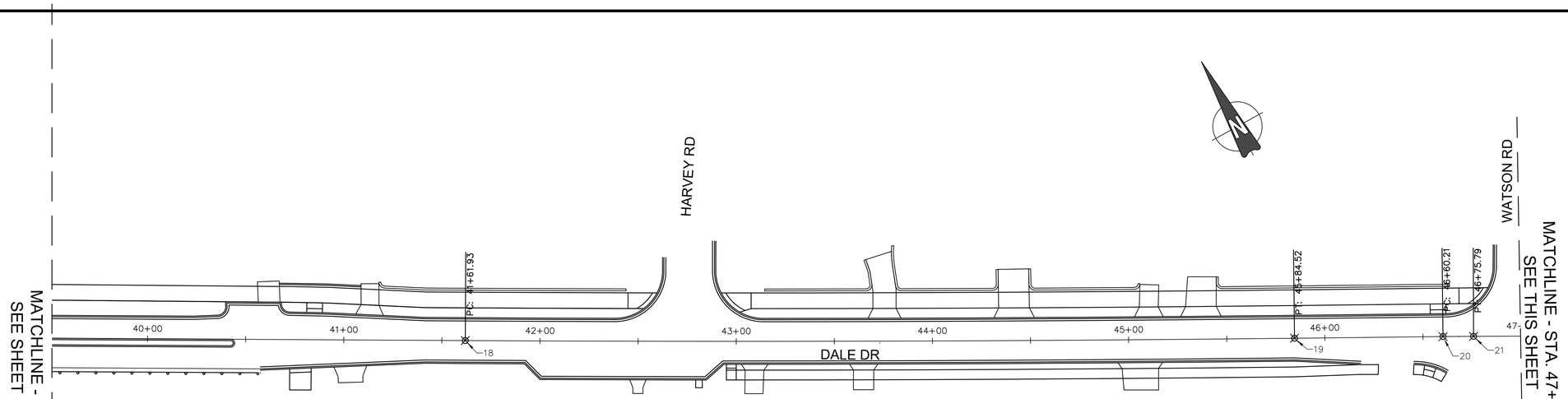
0 30' 60'
SCALE: 1"=30'

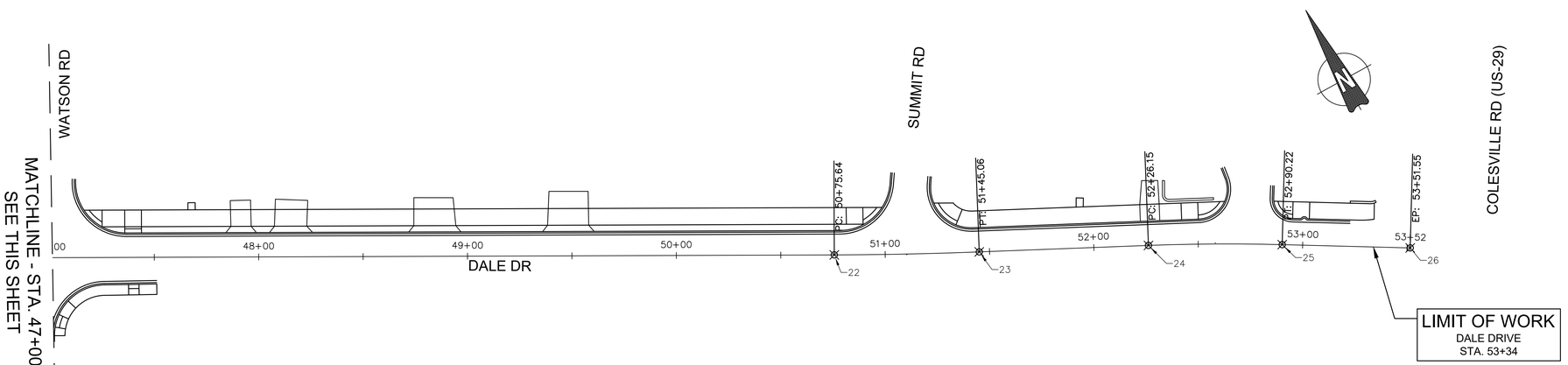
DATE: NOVEMBER 2022

CIP No. : 502109

SHEET 8 of 181

FILE NAME: Q:\2018\1804565_001_Dale_Drive_Pedestria\CADD\pGG_Dale.dwg LAYOUT NAME: GG-03 PLOTTED: Tuesday, November 22, 2022 - 6:58pm USER: AHavener





CONSTRUCTION BASELINE						
Point #	Station	Offset	Elevation	Northing	Easting	Description
18	41+61.63	00.00	280.55	488087.1236	1304764.7597	PC
19	45+84.52	00.00	311.58	487883.2905	1305134.9411	PT
20	46+60.21	00.00	313.41	487847.3452	1305201.5476	PC
21	46+75.79	00.00	313.56	487839.8950	1305215.2251	PT
22	50+75.64	00.00	308.64	487647.2629	1305565.6152	PC
23	51+45.06	00.00	304.76	487614.8783	1305627.0225	PT
24	52+26.15	00.00	298.64	487578.3037	1305699.3918	PC
25	52+90.22	00.00	293.44	487547.5932	1305755.6091	PT
26	53+51.55	00.00	288.85	487516.4820	1305808.4625	POE

DRAFT
NOT FOR CONSTRUCTION

NO.	REVISION	DATE	BY

MONTGOMERY COUNTY
DEPARTMENT OF TRANSPORTATION
GAITHERSBURG, MARYLAND

RECOMMENDED FOR APPROVAL

Chief, Design Section — Date

APPROVED

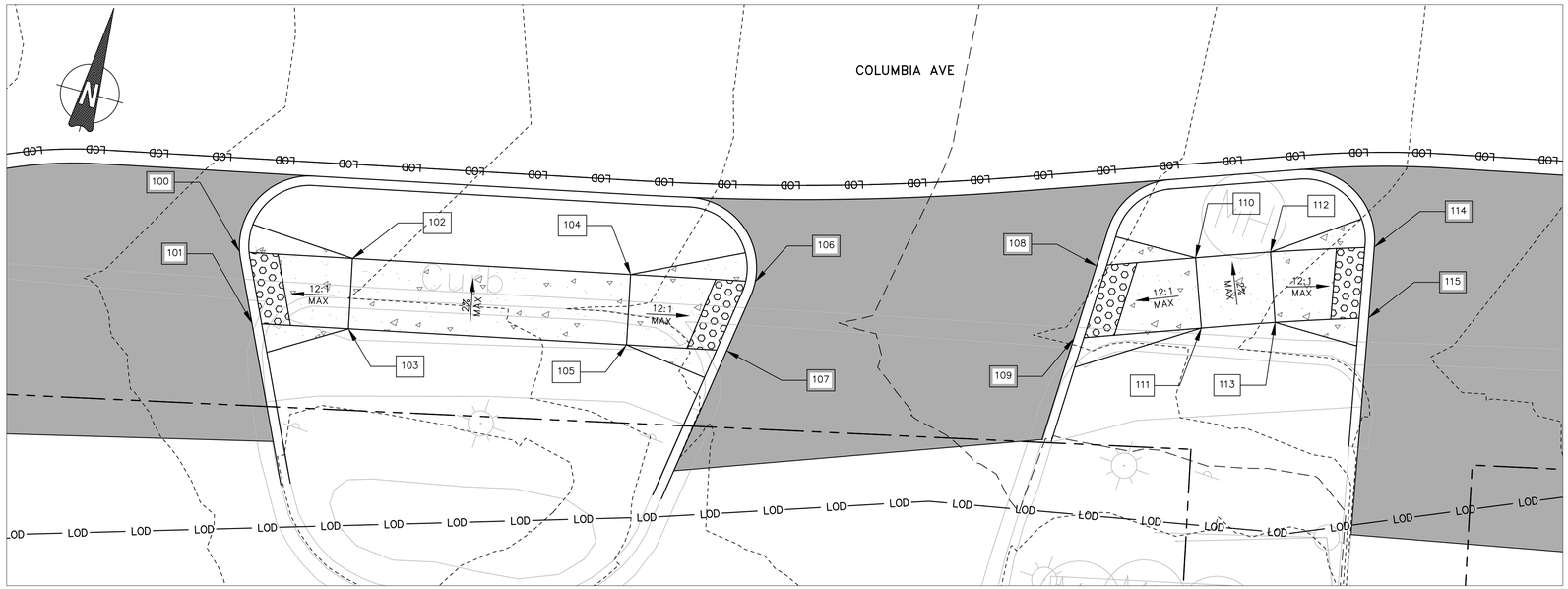
Chief, Division of Transportation Engineering — Date

Designed by: ADH Drawn by: MED Checked by: JJR

GG-04
GRADES AND GEOMETRICS
DALE DRIVE
SHARED USE PATH

0 30' 60'
SCALE: 1"=30'
DATE: NOVEMBER 2022

CIP No. : 502109
SHEET 9 of 181



1+10 RT

1+60 RT

POINT TABLE				
POINT	NORTHING	EASTING	ELEVATION	DESCRIPTION
100	488737.07	1300996.33	352.58	DRIVEWAY FLOWLINE
101	488732.58	1300998.82	352.49	DRIVEWAY FLOWLINE
102	488739.27	1301004.05	352.91	TOP OF RAMP
103	488734.46	1301005.42	353.04	TOP OF RAMP
104	488744.68	1301023.07	351.38	TOP OF RAMP
105	488739.87	1301024.44	351.18	TOP OF RAMP
106	488747.11	1301031.59	350.64	DRIVEWAY FLOWLINE
107	488741.82	1301031.29	350.69	DRIVEWAY FLOWLINE
108	488756.13	1301054.11	349.05	DRIVEWAY FLOWLINE
109	488750.73	1301054.28	348.82	DRIVEWAY FLOWLINE
110	488758.98	1301060.56	349.44	TOP OF RAMP
111	488754.41	1301062.58	359.54	TOP OF RAMP
112	488761.12	1301065.45	347.96	TOP OF RAMP
113	488756.51	1301067.40	348.06	TOP OF RAMP
114	488763.86	1301072.30	347.81	DRIVEWAY FLOWLINE
115	488758.99	1301073.56	347.51	DRIVEWAY FLOWLINE

DRAFT
NOT FOR CONSTRUCTION

NO.	REVISION	DATE	BY

MONTGOMERY COUNTY
DEPARTMENT OF TRANSPORTATION
GAITHERSBURG, MARYLAND

RECOMMENDED FOR APPROVAL

Chief, Design Section — Date

APPROVED

Chief, Division of Transportation Engineering — Date

Designed by: ADH Drawn by: KTL Checked by: JJR

DT-01
PEDESTRIAN RAMP DETAILS
DALE DRIVE
SHARED USE PATH

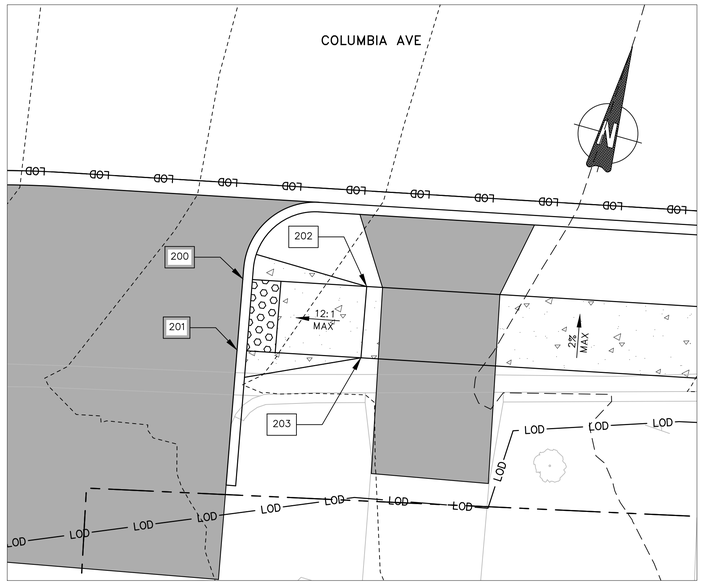
0 30' 60'
SCALE: 1"=30'

DATE: NOVEMBER 2022

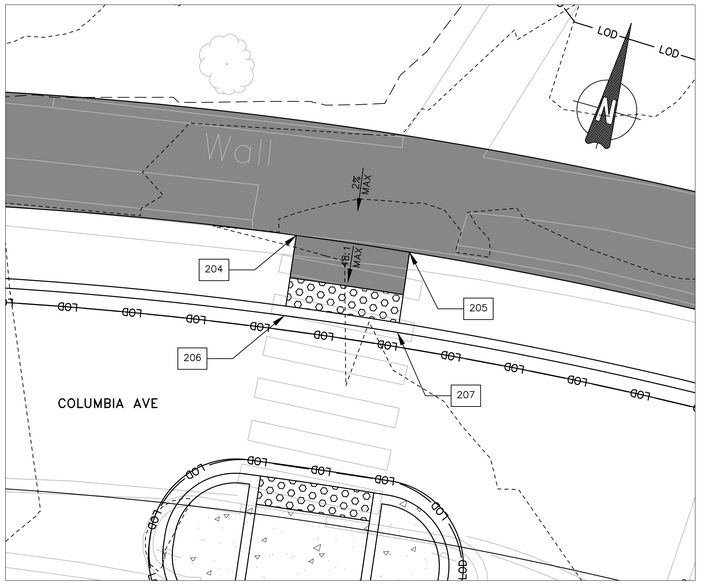
CIP No. : 502109

SHEET 10 of 181

FILE NAME: Q:\2018\1804565_001_Dale_Drive_Pedestria\CADD\pDT-Dale.dwg LAYOUT NAME: DT-01 PLOTTED: Tuesday, November 22, 2022 - 7:00pm USER: AHavener

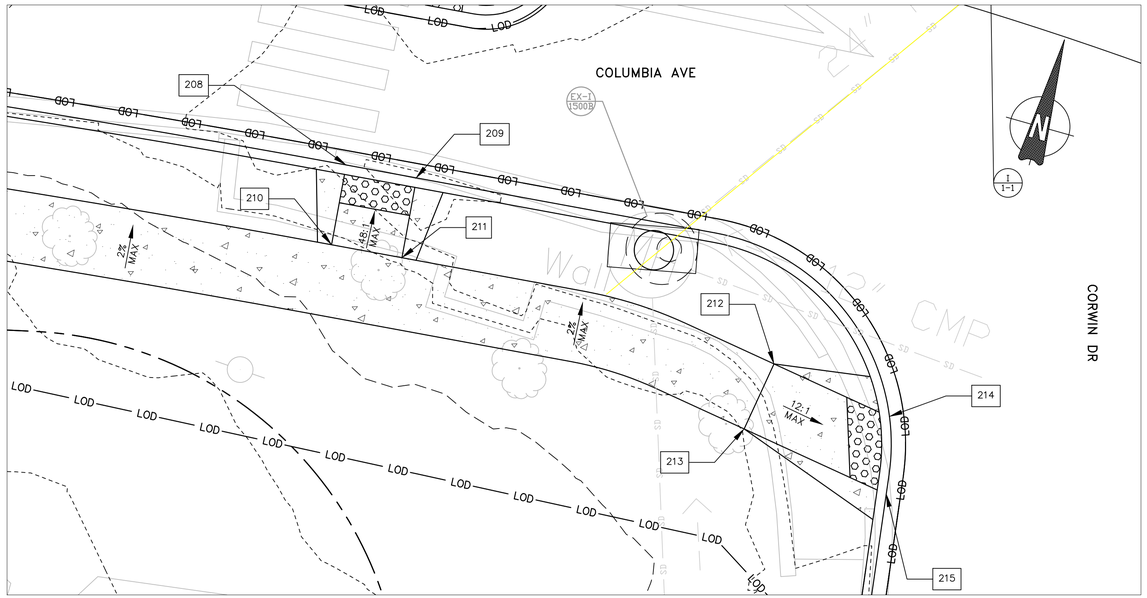


2+00 RT



4+75 LT

POINT TABLE				
POINT	NORTHING	EASTING	ELEVATION	DESCRIPTION
200	488768.94	1301089.45	346.46	DRIVEWAY FLOWLINE
201	488764.10	1301090.71	346.22	DRIVEWAY FLOWLINE
202	488771.29	1301097.80	346.71	TOP OF RAMP
203	488766.45	1301099.06	346.81	TOP OF RAMP
204	488884.75	1301348.26	328.28	TOP OF LANDING
205	488886.24	1301356.12	328.04	TOP OF LANDING
206	488879.18	1301349.32	328.17	ROADWAY FLOWLINE
207	488880.67	1301357.17	327.93	ROADWAY FLOWLINE



4+70 RT

5+10 RT

POINT TABLE				
POINT	NORTHING	EASTING	ELEVATION	DESCRIPTION
208	488845.85	1301357.26	327.97	ROADWAY FLOWLINE
209	488846.61	1301362.20	328.07	ROADWAY FLOWLINE
210	488840.25	1301358.12	328.27	TOP OF LANDING
211	488841.01	1301363.06	328.37	TOP OF LANDING
212	488842.55	1301390.05	327.86	TOP OF RAMP
213	488837.57	1301389.58	327.96	TOP OF RAMP
214	488841.70	1301398.90	327.19	ROADWAY FLOWLINE
215	488836.53	1301400.45	327.39	ROADWAY FLOWLINE

DRAFT
NOT FOR CONSTRUCTION

JMT

NO.	REVISION	DATE	BY

MONTGOMERY COUNTY
DEPARTMENT OF TRANSPORTATION
GAITHERSBURG, MARYLAND

RECOMMENDED FOR APPROVAL

Chief, Design Section — Date

APPROVED

Chief, Division of Transportation Engineering — Date

Designed by: ADH Drawn by: KTL Checked by: JJR

DT-02
PEDESTRIAN RAMP DETAILS
DALE DRIVE
SHARED USE PATH

0 30' 60'

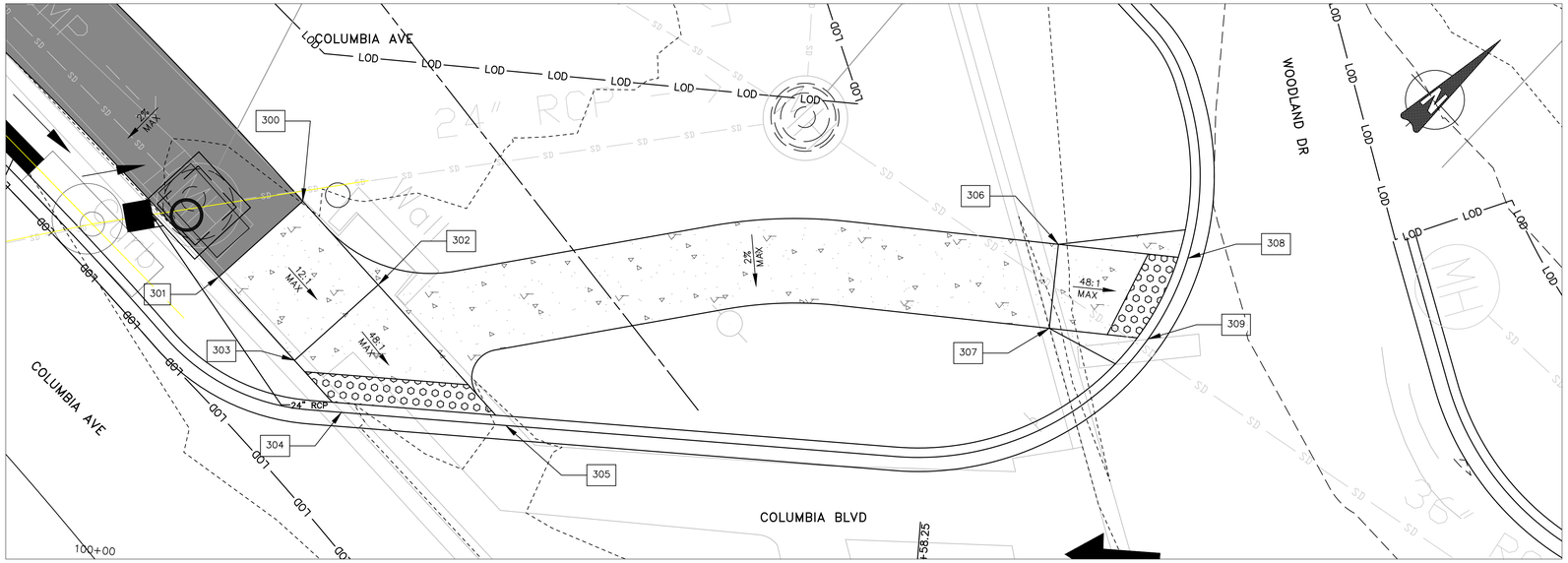
SCALE: 1"=30'

DATE: NOVEMBER 2022

CIP No. : 502109

SHEET 11 of 181

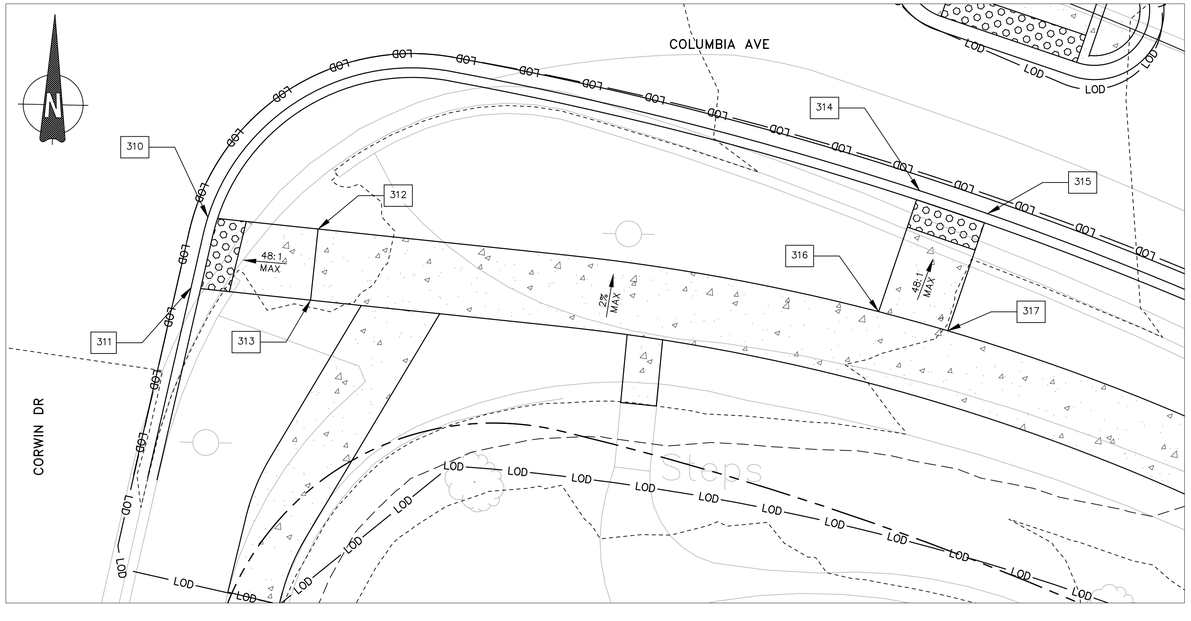
FILE NAME: Q:\2018\1804565_001_Dale_Drive_Pedestria\CADD\pDT-Dale.dwg LAYOUT NAME: DT-02 PLOTTED: Tuesday, November 22, 2022 - 7:01pm USER: AHavener



5+40 LT

5+60 LT

POINT TABLE				
POINT	NORTHING	EASTING	ELEVATION	DESCRIPTION
300	488898.44	1301412.62	327.52	TOP OF RAMP
301	488890.44	1301412.52	327.36	TOP OF RAMP
302	488898.34	1301420.62	327.36	TOP OF LANDING
303	488890.34	1301420.52	327.20	TOP OF LANDING
304	488890.27	1301425.49	321.10	ROADWAY FLOWLINE
305	488898.17	1301434.05	327.09	ROADWAY FLOWLINE
306	488935.75	1301451.28	326.03	TOP OF LANDING
307	488931.24	1301455.24	325.91	TOP OF LANDING
308	488941.82	1301458.25	325.41	ROADWAY FLOWLINE
309	488935.84	1301460.54	325.59	ROADWAY FLOWLINE



5+70 RT

6+15 RT

POINT TABLE				
POINT	NORTHING	EASTING	ELEVATION	DESCRIPTION
310	488837.95	1301437.89	327.69	ROADWAY FLOWLINE
311	488833.02	1301436.82	327.78	ROADWAY FLOWLINE
312	488837.30	1301445.61	327.85	TOP OF LANDING
313	488832.32	1301445.19	328.95	TOP OF LANDING
314	488840.84	1301487.58	328.45	ROADWAY FLOWLINE
315	488839.34	1301492.35	328.62	ROADWAY FLOWLINE
316	488832.33	1301484.88	328.63	TOP OF LANDING
317	488831.10	1301489.74	328.79	TOP OF LANDING

DRAFT
NOT FOR CONSTRUCTION

NO.	REVISION	DATE	BY

MONTGOMERY COUNTY
DEPARTMENT OF TRANSPORTATION
GAITHERSBURG, MARYLAND

RECOMMENDED FOR APPROVAL

Chief, Design Section — Date

APPROVED

Chief, Division of Transportation Engineering — Date

Designed by: ADH Drawn by: KTL Checked by: JJR

DT-03
PEDESTRIAN RAMP DETAILS
DALE DRIVE
SHARED USE PATH

0 30' 60'

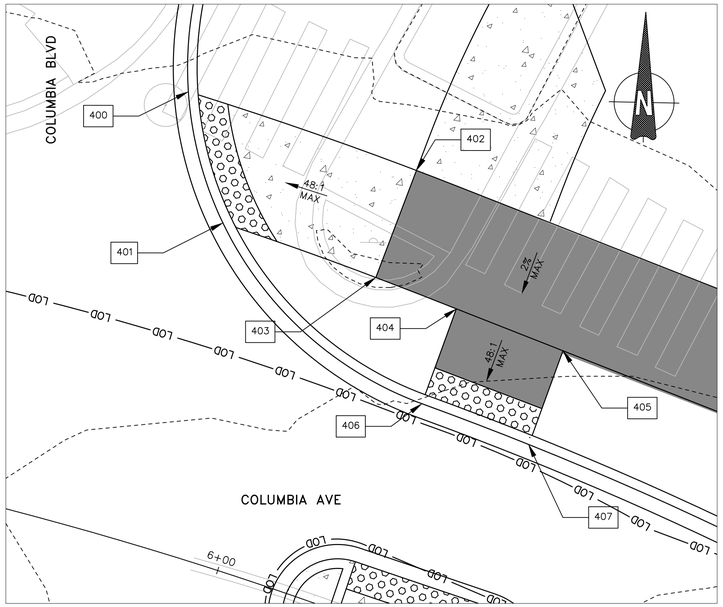
SCALE: 1"=30'

DATE: NOVEMBER 2022

CIP No.: 502109

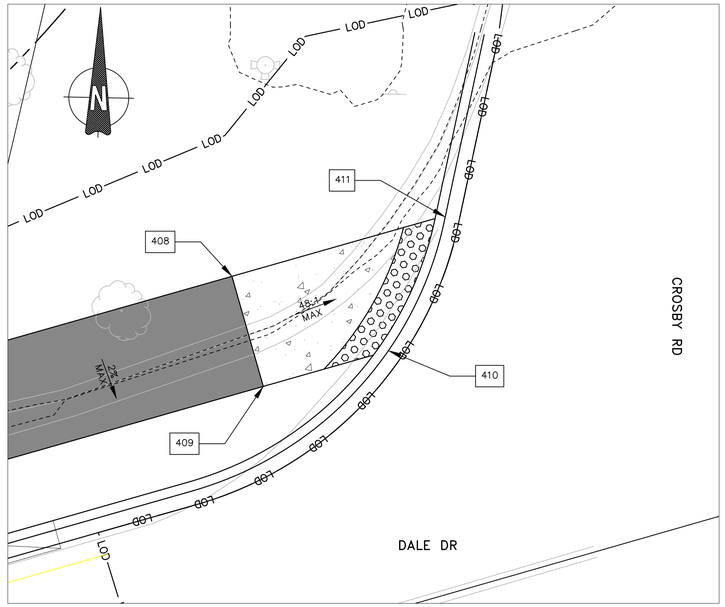
SHEET 12 of 181

FILE NAME: Q:\2018\1804565_001_Dale_Drive_Pedestria\CADD\pDT-Dale.dwg LAYOUT NAME: DT-03 PLOTTED: Tuesday, November 22, 2022 - 7:01pm USER: AHavener

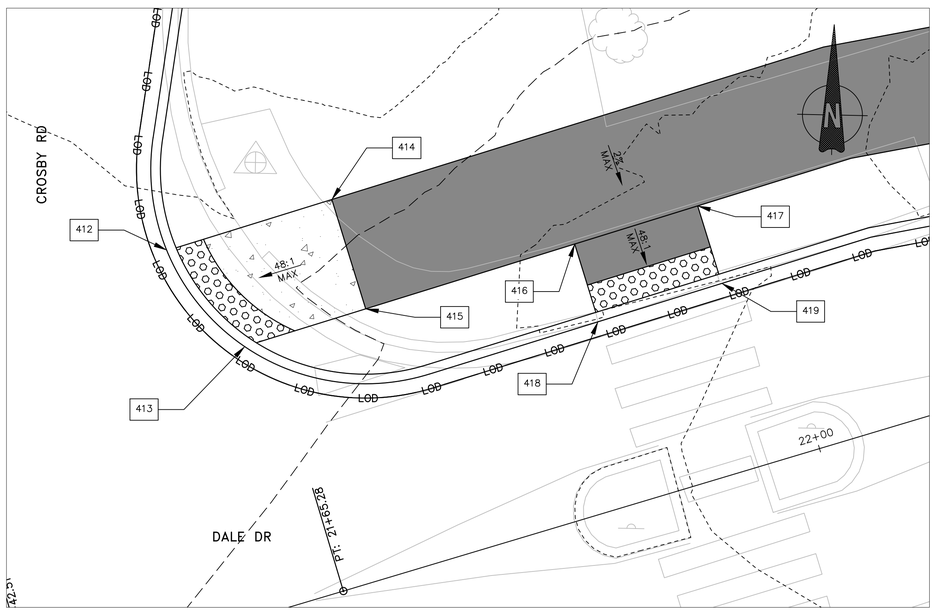


5+90 LT 6+15 LT

POINT TABLE				
POINT	NORTHING	EASTING	ELEVATION	DESCRIPTION
400	488893.02	1301478.82	327.12	ROADWAY FLOWLINE
401	488883.90	1301481.42	327.56	ROADWAY FLOWLINE
402	488887.84	1301494.86	327.46	TOP OF LANDING
403	488880.30	1301492.18	327.79	TOP OF LANDING
404	488878.21	1301497.85	328.16	TOP OF LANDING
405	488875.28	1301505.30	329.43	TOP OF LANDING
406	488871.55	1301495.58	328.02	ROADWAY FLOWLINE
407	488868.85	1301503.11	329.29	ROADWAY FLOWLINE
408	488475.87	1302864.81	309.50	TOP OF LANDING
409	488468.22	1302867.16	309.48	TOP OF LANDING
410	488470.89	1302879.64	309.30	ROADWAY FLOWLINE
411	488480.42	1302875.84	309.19	ROADWAY FLOWLINE



21+15 LT



21+60 RT 21+90 RT

POINT TABLE				
POINT	NORTHING	EASTING	ELEVATION	DESCRIPTION
412	488492.73	1302916.34	309.12	ROADWAY FLOWLINE
413	488486.15	1302921.90	309.57	ROADWAY FLOWLINE
414	488496.54	1302927.79	309.36	TOP OF LANDING
415	488488.95	1302930.31	309.75	TOP OF LANDING
416	488493.78	1302944.82	310.93	TOP OF LANDING
417	488496.62	1302953.36	310.96	TOP OF LANDING
418	488488.40	1302946.61	310.51	ROADWAY FLOWLINE
419	488491.24	1302955.15	310.85	ROADWAY FLOWLINE

DRAFT
NOT FOR CONSTRUCTION

NO.	REVISION	DATE	BY

MONTGOMERY COUNTY
DEPARTMENT OF TRANSPORTATION
GAITHERSBURG, MARYLAND

RECOMMENDED FOR APPROVAL

Chief, Design Section — Date

APPROVED

Chief, Division of Transportation Engineering — Date

Designed by: ADH Drawn by: KTL Checked by: JJR

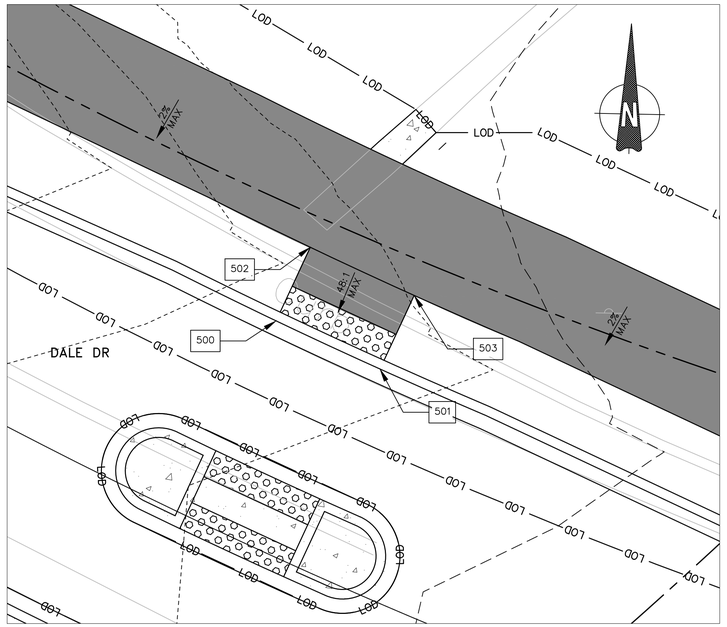
DT-04
PEDESTRIAN RAMP DETAILS
DALE DRIVE
SHARED USE PATH

0 30' 60'

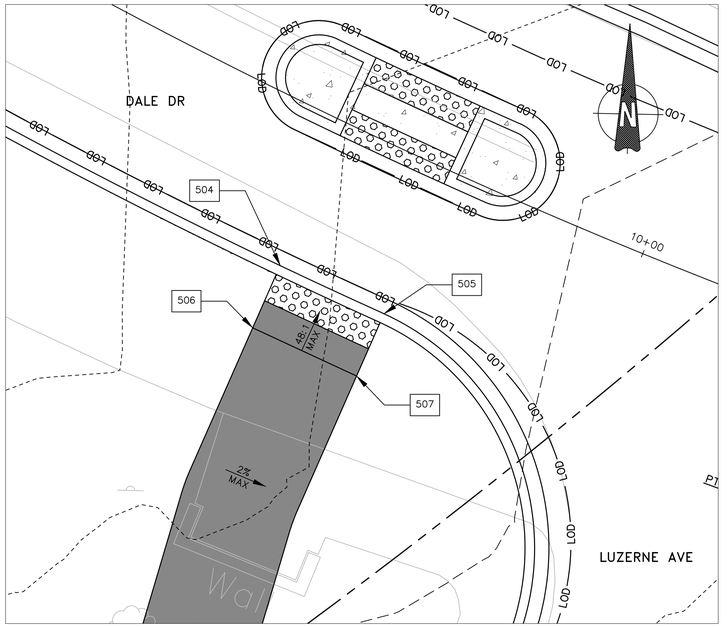
SCALE: 1"=30' DATE: NOVEMBER 2022

CIP No.: 502109 SHEET 13 of 181

FILE NAME: Q:\2018\1804565_001_Dale_Drive_Pedestria\CADD\pDT-Dale.dwg LAYOUT NAME: DT-04 PLOTTED: Tuesday, November 22, 2022 - 7:01pm USER: AHavener

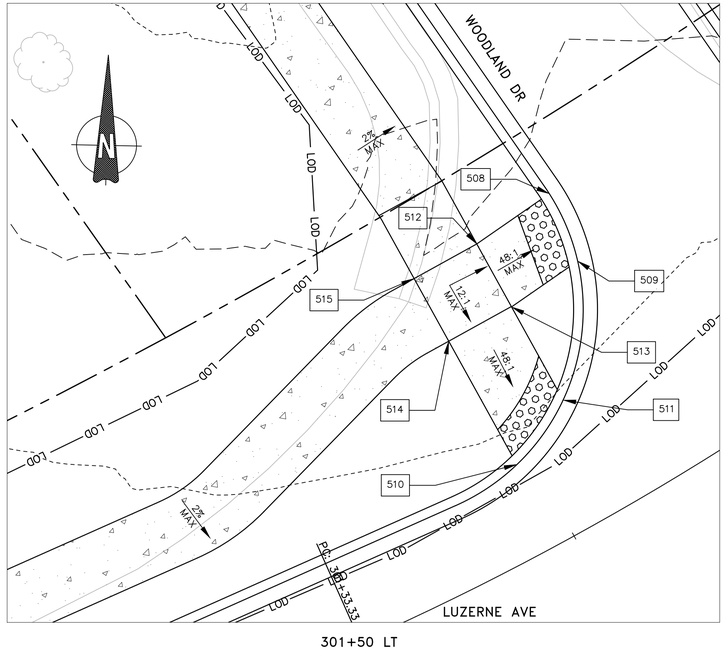


9+80 LT

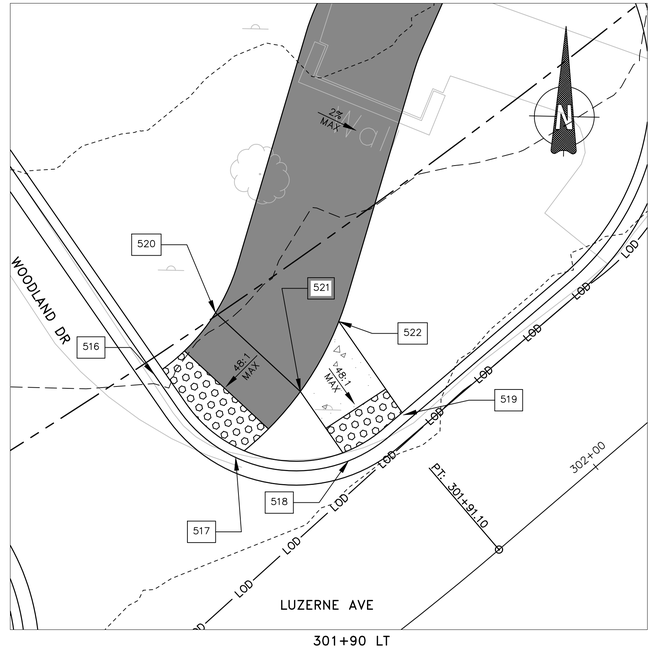


9+80 RT

POINT TABLE				
POINT	NORTHING	EASTING	ELEVATION	DESCRIPTION
500	488651.25	1301787.24	353.30	ROADWAY FLOWLINE
501	488648.04	1301794.57	353.78	ROADWAY FLOWLINE
502	488656.40	1301789.50	353.41	TOP OF LANDING
503	488653.23	1301796.85	353.89	TOP OF LANDING
504	488627.43	1301776.81	353.77	ROADWAY FLOWLINE
505	488624.24	1301784.08	354.24	ROADWAY FLOWLINE
506	488623.04	1301774.99	353.87	TOP OF LANDING
507	488619.83	1301782.31	354.35	TOP OF LANDING



301+50 LT



301+90 LT

POINT TABLE				
POINT	NORTHING	EASTING	ELEVATION	DESCRIPTION
508	488575.32	1301748.96	355.28	ROADWAY FLOWLINE
509	488570.65	1301751.04	355.61	ROADWAY FLOWLINE
510	488556.35	1301747..09	355.52	ROADWAY FLOWLINE
511	488560.92	1301750.22	355.47	ROADWAY FLOWLINE
512	488571.70	1301743.97	355.40	TOP OF LANDING
513	488567.36	1301746.49	355.62	TOP OF LANDING
514	488564.87	1301742.15	355.72	TOP OF LANDING
515	488569.20	1301739.64	355.82	TOP OF RAMP
516	488587.20	1301760.13	355.82	ROADWAY FLOWLINE
517	488581.53	1301765.92	355.56	ROADWAY FLOWLINE
518	488581.45	1301773.80	355.57	ROADWAY FLOWLINE
519	488584.35	1301777.88	355.91	ROADWAY FLOWLINE
520	488591.62	1301764.31	355.85	TOP OF LANDING
521	488586.23	1301770.35	355.69	TOP OF LANDING
522	488591.19	1301772.93	356.08	TOP OF LANDING

DRAFT
NOT FOR CONSTRUCTION

NO.	REVISION	DATE	BY

MONTGOMERY COUNTY
DEPARTMENT OF TRANSPORTATION
GAITHERSBURG, MARYLAND

RECOMMENDED FOR APPROVAL

Chief, Design Section — Date

APPROVED

Chief, Division of Transportation Engineering — Date

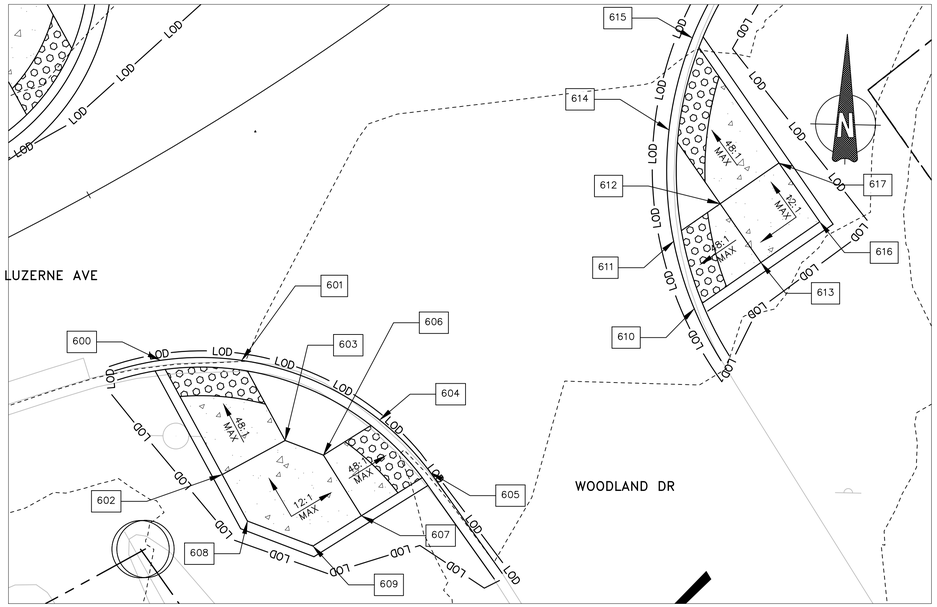
Designed by: ADH Drawn by: KTL Checked by: JJR

DT-05
PEDESTRIAN RAMP DETAILS
DALE DRIVE
SHARED USE PATH

0 30' 60'

SCALE: 1"=30' DATE: NOVEMBER 2022

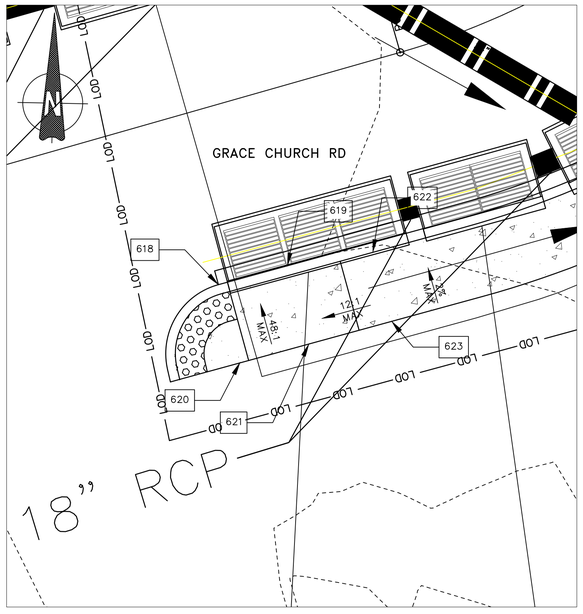
CIP No. : 502109 SHEET 14 of 181



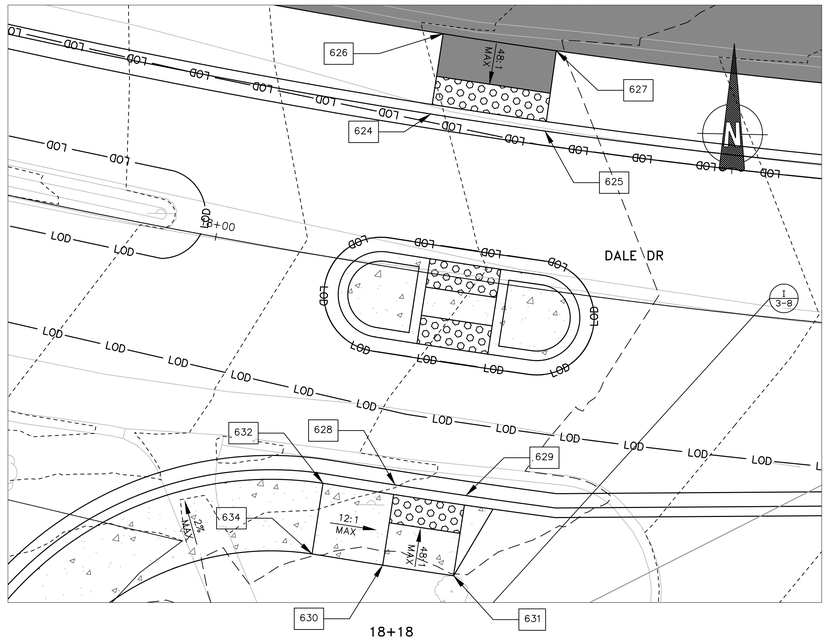
301+50 RT

301+85 RT

POINT TABLE				
POINT	NORTHING	EASTING	ELEVATION	DESCRIPTION
600	488539.99	1301756.43	356.99	ROADWAY FLOWLINE
601	488540.10	1301762.12	357.13	ROADWAY FLOWLINE
602	488532.09	1301760.92	357.12	TOP OF LANDING
603	488534.57	1301765.27	357.42	TOP OF LANDING
604	488536.13	1301771.84	357.30	ROADWAY FLOWLINE
605	488532.52	1301775.47	357.51	ROADWAY FLOWLINE
606	488533.60	1301767.96	357.41	TOP OF LANDING
607	588529.41	1301770.70	357.41	TOP OF LANDING
608	488528.87	1301760.92	357.38	TOP OF RAMP
609	488527.22	1301767.36	357.60	TOP OF RAMP
610	488544.36	1301793	357.64	ROADWAY FLOWLINE
611	488549.37	1301792.05	357.34	ROADWAY FLOWLINE
612	488551.73	1301795.31	357.42	TOP OF LANDING
613	488547.68	1301798.26	357.52	TOP OF LANDING
614	488556.81	1301791.63	357.11	ROADWAY FLOWLINE
615	488563.27	1301793.14	356.97	ROADWAY FLOWLINE
616	488550.61	1201802.30	357.89	TOP OF LANDING
617	488554.66	1301799.37	357.31	TOP OF RAMP



200+16 RT



18+18

POINT TABLE				
POINT	NORTHING	EASTING	ELEVATION	DESCRIPTION
618	488321.63	1302490.78	322.24	ROADWAY FLOWLINE
619	488323.05	1392495.57	322.08	ROADWAY FLOWLINE
620	488316.20	1302492.39	322.35	TOP OF LANDING
621	488317.61	1302497.18	322.19	TOP OF LANDING
622	488324.11	1302501.52	322.53	BACK OF CURB
623	488319.03	1302501.98	322.63	TOP OF RAMP
624	488422.70	1302587.33	321.09	ROADWAY FLOWLINE
625	488421.67	1302595.34	320.31	ROADWAY FLOWLINE
626	488428.32	1302588.08	321.20	TOP OF LANDING
627	488427.30	1302596.01	320.42	TOP OF LANDING
628	488396.73	1302585.38	322.02	ROADWAY FLOWLINE
629	488396.09	1302590.34	320.67	ROADWAY FLOWLINE
630	488391.11	1302584.63	322.12	TOP OF LANDING
631	488390.46	1302589.59	320.78	TOP OF LANDING
632	488396.75	1302580.34	321.36	BACK OF CURB
633	488391.79	1302579.67	322.22	TOP OF RAMP

DRAFT
NOT FOR CONSTRUCTION

NO.	REVISION	DATE	BY

MONTGOMERY COUNTY
DEPARTMENT OF TRANSPORTATION
GAITHERSBURG, MARYLAND

RECOMMENDED FOR APPROVAL

Chief, Design Section — Date

APPROVED

Chief, Division of Transportation Engineering — Date

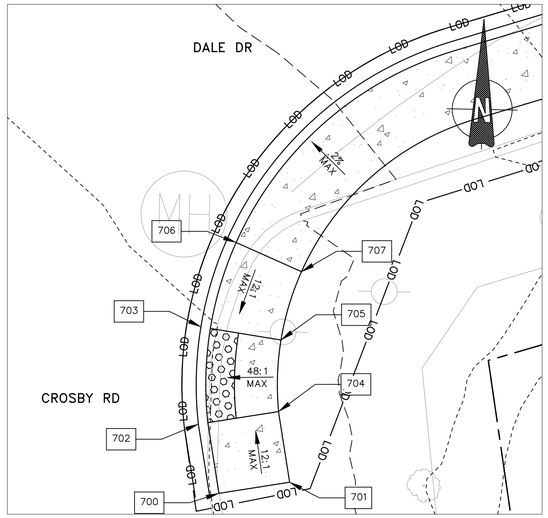
Designed by: ADH Drawn by: KTL Checked by: JJR

DT-06
PEDESTRIAN RAMP DETAILS
DALE DRIVE
SHARED USE PATH

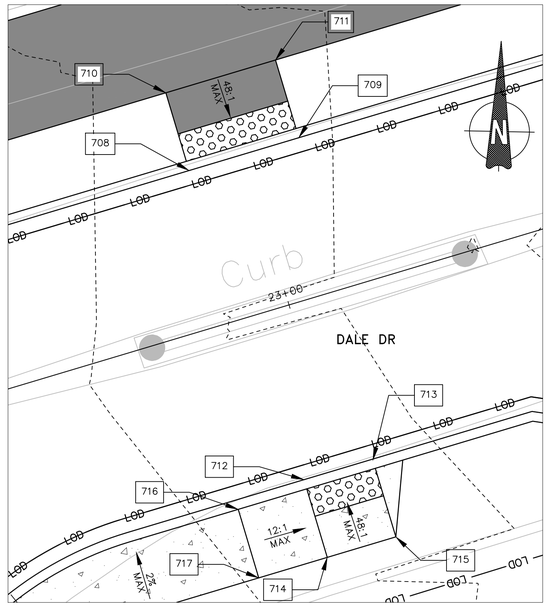
0 30' 60'

SCALE: 1"=30' DATE: NOVEMBER 2022

CIP No. : 502109 SHEET 15 of 181

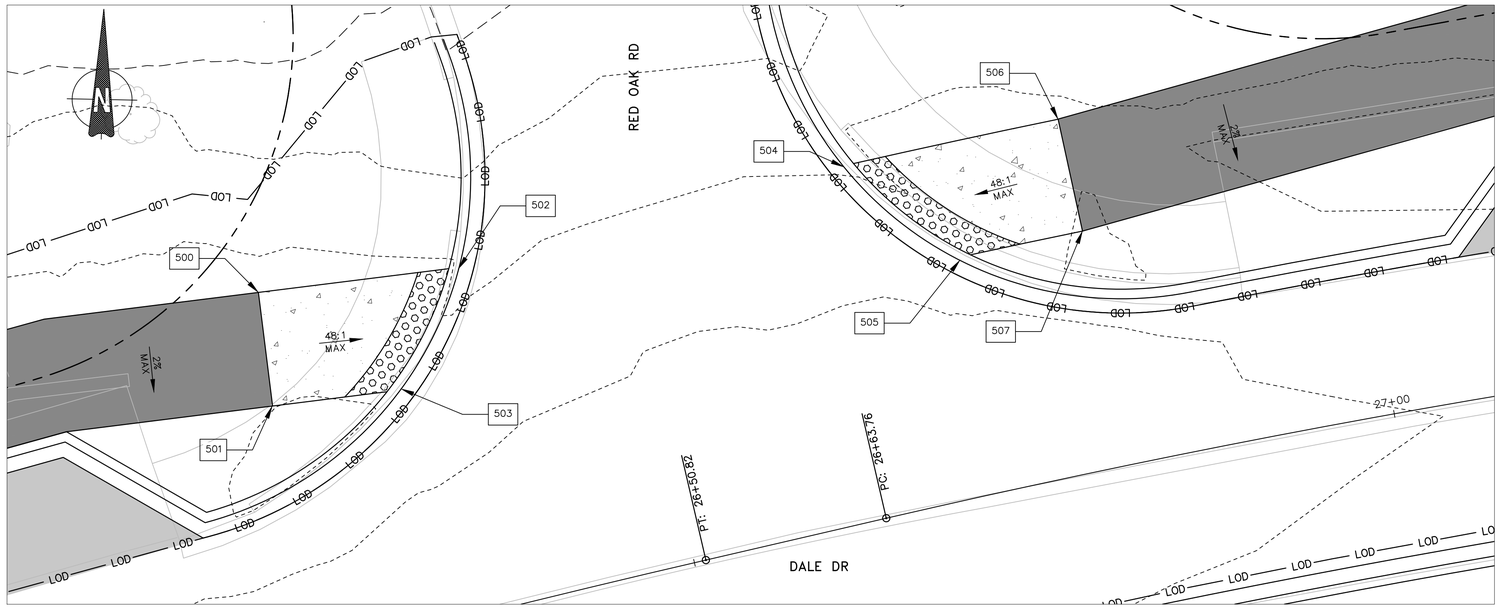


22+60 RT



23+00

POINT TABLE				
POINT	NORTHING	EASTING	ELEVATION	DESCRIPTION
700	488462.42	1303030.80	314.38	BACK OF CURB
701	488463.30	1303035.72	314.48	TOP OF RAMP
702	488467.23	1303029.27	313.69	ROADWAY FLOWLINE
703	488474.02	1303029.31	313.96	ROADWAY FLOWLINE
704	488468.22	1303034.85	314.06	TOP OF LANDING
705	488473.22	1303034.92	313.79	TOP OF LANDING
706	488479.97	1303031.65	314.11	BACK OF CURB
707	488478.02	1303036.25	314.21	TOP OF RAMP
708	488519.71	1303050.23	316.39	ROADWAY FLOWLINE
709	488522.16	1303057.85	316.86	ROADWAY FLOWLINE
710	488525.11	1303048.50	316.50	TOP OF LANDING
711	488527.56	1303056.11	316.97	TOP OF LANDING
712	488498.28	1303058.71	316.49	ROADWAY FLOWLINE
713	488499.81	1303063.46	316.77	ROADWAY FLOWLINE
714	488492.88	1303060.44	316.60	TOP OF LANDING
715	488494.41	1303065.20	316.88	TOP OF LANDING
716	488496.11	1303054.15	316.71	BACK OF CURB
717	488491.35	1303055.68	316.81	TOP OF RAMP



26+30 LT

26+70 LT

POINT TABLE				
POINT	NORTHING	EASTING	ELEVATION	DESCRIPTION
500	488634.08	1303360.29	326.94	TOP OF LANDING
501	488626.16	1303361.44	327.60	TOP OF LANDING
502	488636.12	1303374.28	326.66	ROADWAY FLOWLINE
503	488627.46	1303370.35	327.42	ROADWAY FLOWLINE
504	488643.69	1303401.01	326.92	ROADWAY FLOWLINE
505	488637.33	1303409.24	327.56	ROADWAY FLOWLINE
506	488647.33	1303415.91	327.23	TOP OF LANDING
507	488639.55	1303417.77	327.74	TOP OF LANDING

DRAFT
NOT FOR CONSTRUCTION

NO.	REVISION	DATE	BY

MONTGOMERY COUNTY
DEPARTMENT OF TRANSPORTATION
GAITHERSBURG, MARYLAND

RECOMMENDED FOR APPROVAL

Chief, Design Section — Date

APPROVED

Chief, Division of Transportation Engineering — Date

Designed by: ADH Drawn by: KTL Checked by: JJR

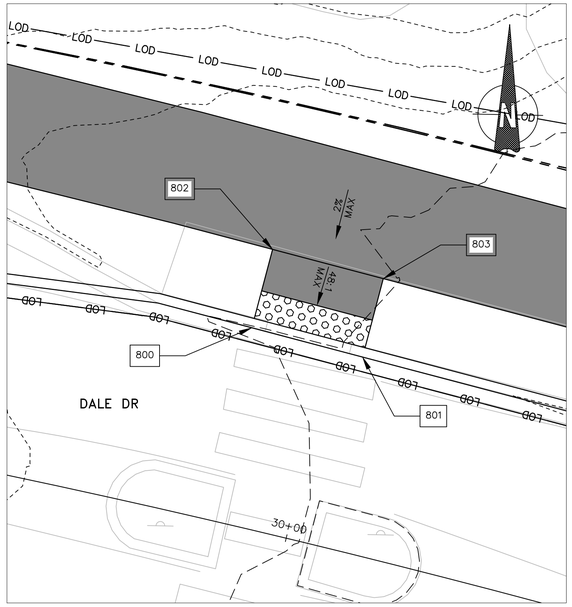
DT-07
PEDESTRIAN RAMP DETAILS
DALE DRIVE
SHARED USE PATH

0 30' 60'

SCALE: 1"=30' DATE: NOVEMBER 2022

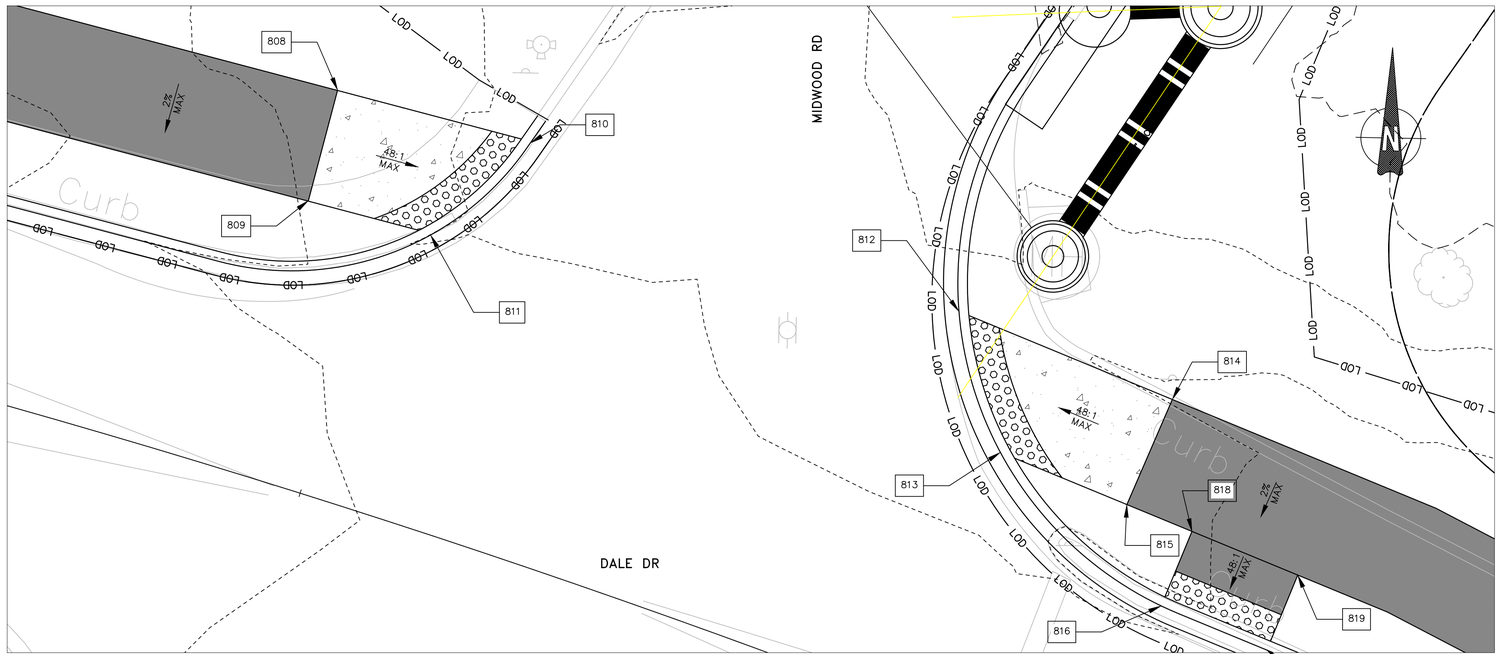
CIP No. : 502109 SHEET 16 of 181

FILE NAME: Q:\2018\1804565_001_Dale_Drive_Pedestria\CADD\pDT-Dale.dwg LAYOUT NAME: DT-07 PLOTTED: Tuesday, November 22, 2022 - 7:03pm USER: AHavener



30+00 LT

POINT TABLE				
POINT	NORTHING	EASTING	ELEVATION	DESCRIPTION
800	488639.33	1303734.97	314.76	ROADWAY FLOWLINE
801	488637.45	1303742.74	314.45	ROADWAY FLOWLINE
802	488644.84	1303736.30	314.87	TOP OF LANDING
803	488642.96	1303744.08	314.56	TOP OF LANDING



30+50 LT

30+90 LT

31+12 LT

POINT TABLE				
POINT	NORTHING	EASTING	ELEVATION	DESCRIPTION
808	488640.51	1303788.14	311.91	TOP OF LANDING
809	488632.78	1303786.28	312.12	TOP OF LANDING
810	488584.13	1301742.60	311.63	ROADWAY FLOWLINE
811	488580.08	1301745.53	311.94	ROADWAY FLOWLINE
812	488580.81	1301738.00	311.32	ROADWAY FLOWLINE
813	488576.76	488576.75	311.77	ROADWAY FLOWLINE
814	488560.01	1301745.06	311.64	TOP OF LANDING
815	488564.79	1301748.08	311.96	TOP OF LANDING
816	488566.61	1301741.24	312.44	ROADWAY FLOWLINE
817	488569.12	1301745.57	312.64	ROADWAY FLOWLINE
818	488570.93	1301738.73	312.55	TOP OF LANDING
819	488573.44	1301743.06	312.75	TOP OF LANDING

DRAFT
NOT FOR CONSTRUCTION

NO.	REVISION	DATE	BY

MONTGOMERY COUNTY
DEPARTMENT OF TRANSPORTATION
GAITHERSBURG, MARYLAND

RECOMMENDED FOR APPROVAL

Chief, Design Section — Date

APPROVED

Chief, Division of Transportation Engineering — Date

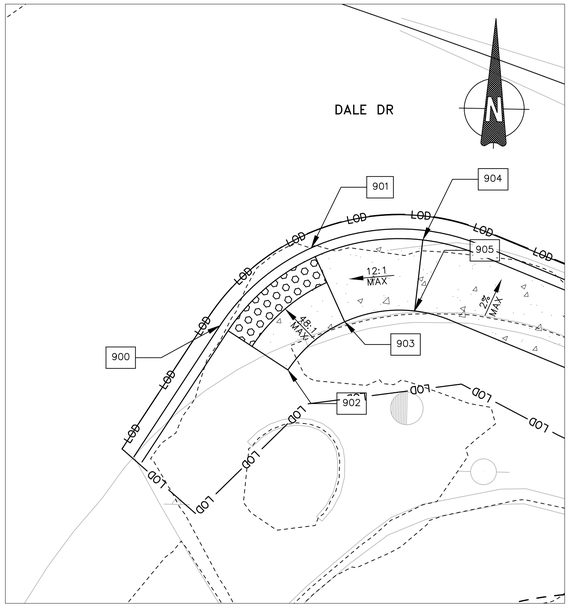
Designed by: ADH Drawn by: KTL Checked by: JJR

DT-08
PEDESTRIAN RAMP DETAILS
DALE DRIVE
SHARED USE PATH

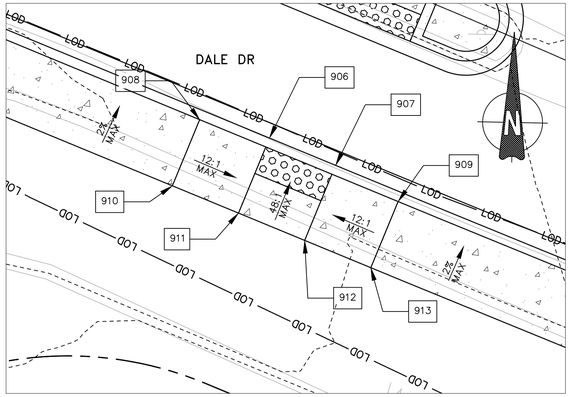
0 30' 60'

SCALE: 1"=30' DATE: NOVEMBER 2022

CIP No. : 502109 SHEET 17 of 181

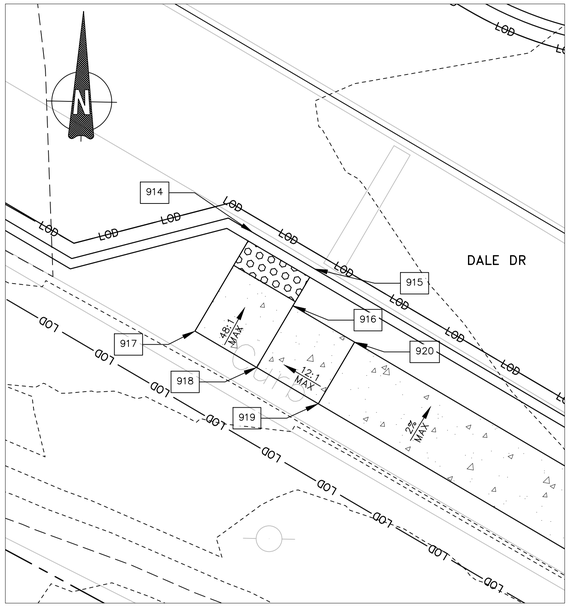


30+74 RT

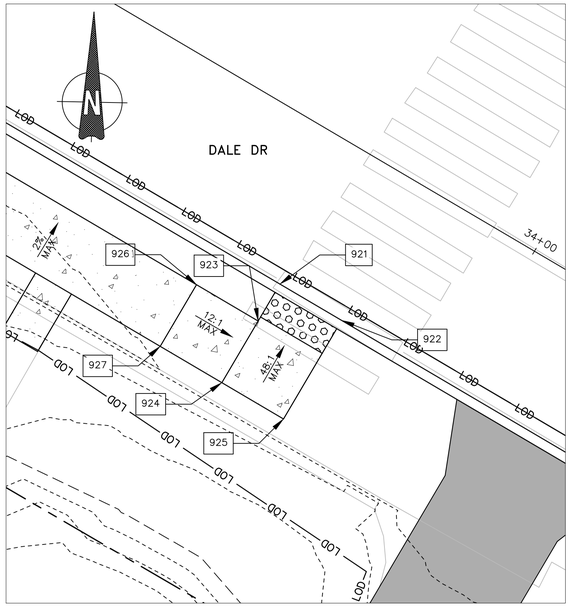


31+12 RT

POINT TABLE				
POINT	NORTHING	EASTING	ELEVATION	DESCRIPTION
900	488583.54	1303798.01	312.03	ROADWAY FLOWLINE
901	488589.09	1303804.27	312.00	ROADWAY FLOWLINE
902	488580.53	1303802.82	312.13	TOP OF LANDING
903	488583.99	1303906.70	312.11	TOP OF LANDING
904	488589.81	1303812.05	312.42	BACK OF CURB
905	488584.83	1303811.58	312.52	TOP OF RAMP
906	488580.86	1303838.38	312.35	ROADWAY FLOWLINE
907	488579.06	1303833.48	312.50	ROADWAY FLOWLINE
908	488582.06	1303847.46	312.75	BACK OF CURB
909	488576.62	10303831.67	312.03	BACK OF CURB
910	488577.39	1303836.33	312.85	TOP OF RAMP
911	488575.58	1303836.33	312.43	TOP OF LANDING
912	488573.77	1303840.98	312.61	TOP OF LANDING
913	488571.96	1303845.65	313.03	TOP OF RAMP



33+33 RT



33+88 RT

POINT TABLE				
POINT	NORTHING	EASTING	ELEVATION	DESCRIPTION
914	488484.56	1304034.71	325.66	ROADWAY FLOWLINE
915	488482.11	1304039.07	325.70	ROADWAY FLOWLINE
916	488479.50	1304037.60	325.76	TOP OF LANDING
917	488477.59	1304030.80	325.82	TOP OF LANDING
918	488475.15	1304035.16	325.92	TOP OF LANDING
919	488472.70	1304039.52	325.94	TOP OF RAMP
920	488477.06	1304041.97	325.85	TOP OF RAMP
921	488457.60	1304082.72	326.39	ROADWAY FLOWLINE
922	488455.15	1304087.08	326.41	ROADWAY FLOWLINE
923	488454.98	1304081.26	326.33	TOP OF LANDING
924	488450.63	1304078.81	326.43	TOP OF LANDING
925	488448.18	1304083.17	326.57	TOP OF LANDING
926	488457.44	1304076.90	326.83	TOP OF RAMP
927	488453.08	1304074.45	326.93	TOP OF RAMP

DRAFT
NOT FOR CONSTRUCTION

JMT

NO.	REVISION	DATE	BY

MONTGOMERY COUNTY
DEPARTMENT OF TRANSPORTATION
GAITHERSBURG, MARYLAND

RECOMMENDED FOR APPROVAL

Chief, Design Section — Date

APPROVED

Chief, Division of Transportation Engineering — Date

Designed by: ADH Drawn by: KTL Checked by: JJR

DT-09
PEDESTRIAN RAMP DETAILS
DALE DRIVE
SHARED USE PATH

0 30' 60'

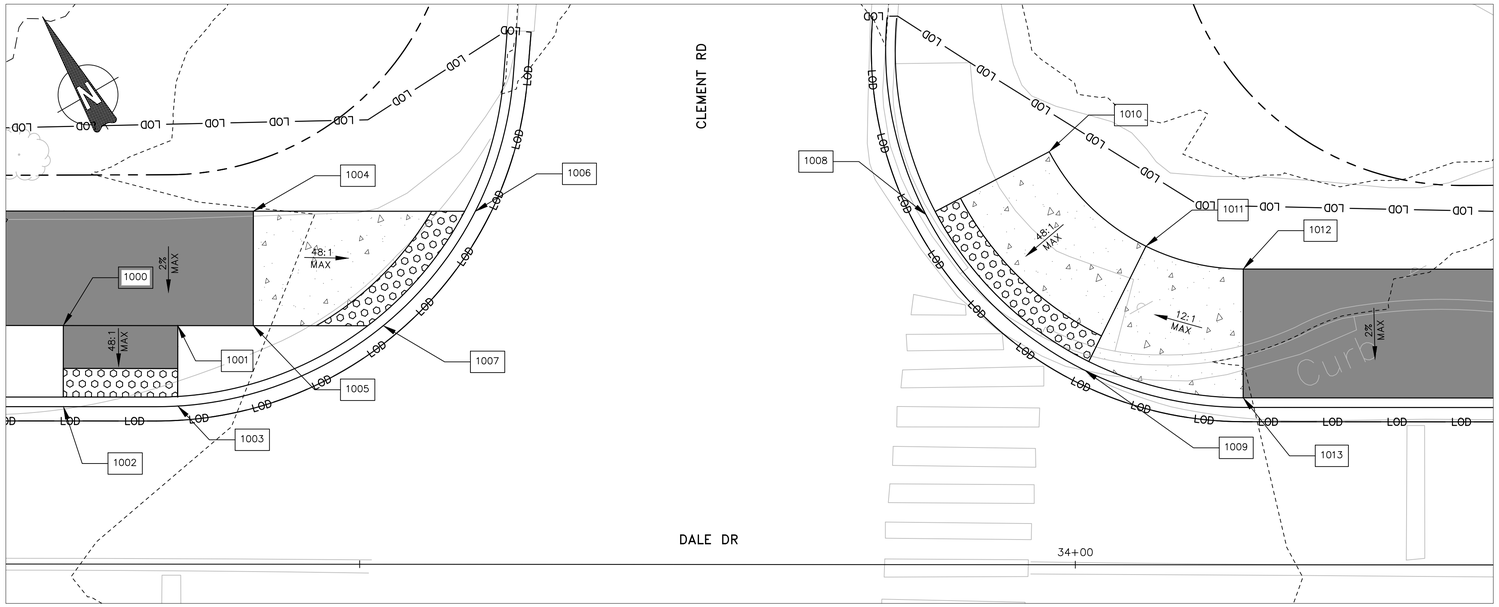
SCALE: 1"=30'

DATE: NOVEMBER 2022

CIP No. : 502109

SHEET 18 of 181

FILE NAME: Q:\2018\1804565_001_Dale_Drive_Pedestria\CADD\pDT-Dale.dwg LAYOUT NAME: DT-09 PLOTTED: Tuesday, November 22, 2022 - 7:03pm USER: AHavener

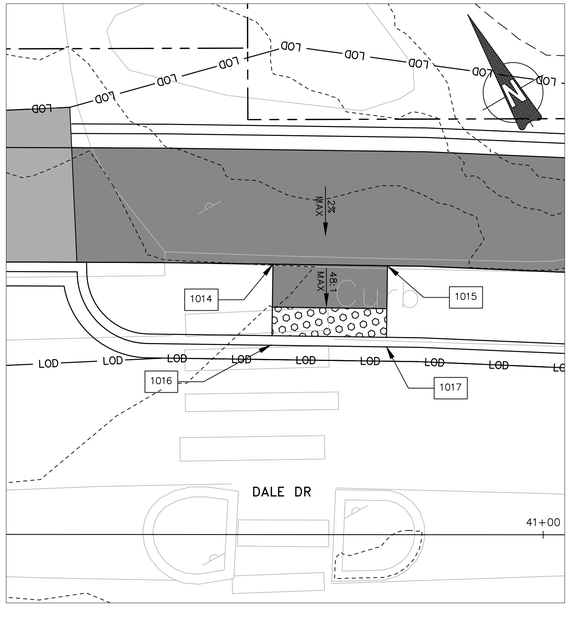


33+30 LT

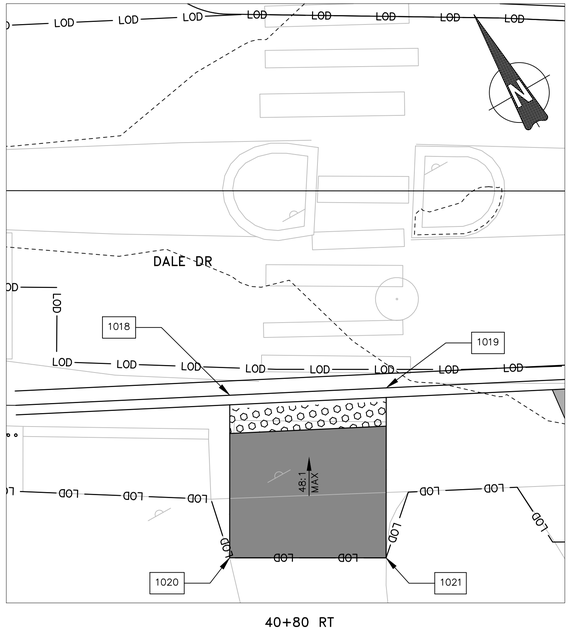
33+50 LT

33+90 LT

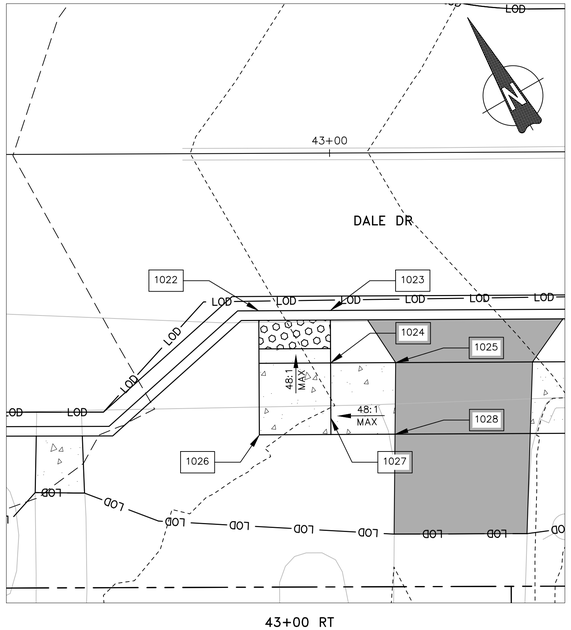
POINT TABLE				
POINT	NORTHING	EASTING	ELEVATION	DESCRIPTION
1000	488509.43	1304046.96	325.71	TOP OF LANDING
1001	488505.51	1304053.93	325.98	TOP OF LANDING
1002	488504.49	1304044.18	325.60	ROADWAY FLOWLINE
1003	488500.60	1304051.19	325.87	ROADWAY FLOWLINE
1004	488509.90	1304062.45	326.47	TOP OF LANDING
1005	488502.93	1304058.53	326.47	TOP OF LANDING
1006	488502.30	1304075.96	326.16	ROADWAY FLOWLINE
1007	488498.48	1304066.45	326.29	ROADWAY FLOWLINE
1008	488486.59	1304103.31	326.76	ROADWAY FLOWLINE
1009	488471.80	1304107.66	326.08	ROADWAY FLOWLINE
1010	488486.33	1304112.98	326.95	TOP OF LANDING
1011	488477.26	1304115.65	326.27	TOP OF LANDING
1012	488472.54	1304120.80	326.42	TOP OF RAMP
1013	488464.70	1304116.39	326.24	TOP OF RAMP



40+80 LT



40+80 RT



43+00 RT

POINT TABLE				
POINT	NORTHING	EASTING	ELEVATION	DESCRIPTION
1014	488143.18	1304703.55	276.18	TOP OF LANDING
1015	488139.17	1304710.47	276.37	TOP OF LANDING
1016	488138.27	1304700.71	276.07	ROADWAY FLOWLINE
1017	488134.26	1304707.63	276.26	ROADWAY FLOWLINE
1018	488118.45	1304679.82	275.29	ROADWAY FLOWLINE
1019	488113.55	1304689.60	275.91	ROADWAY FLOWLINE
1020	488108.55	1304674.25	275.52	TOP OF LANDING
1021	488103.20	1304683.78	276.15	TOP OF LANDING
1022	488012.65	1304875.62	290.88	ROADWAY FLOWLINE
1023	488010.22	1304879.99	291.28	ROADWAY FLOWLINE
1024	488007.01	1304878.21	291.36	TOP OF RAMP
1025	488004.80	1304882.19	291.45	TOP OF RAMP
1026	488005.07	1304871.42	291.05	TOP OF RAMP
1027	488002.64	1304875.79	291.46	TOP OF RAMP
1028	488000.46	1304879.71	291.83	TOP OF RAMP

DRAFT
NOT FOR CONSTRUCTION

NO.	REVISION	DATE	BY

MONTGOMERY COUNTY
DEPARTMENT OF TRANSPORTATION
GAITHERSBURG, MARYLAND

RECOMMENDED FOR APPROVAL

Chief, Design Section — Date

APPROVED

Chief, Division of Transportation Engineering — Date

Designed by: ADH Drawn by: KTL Checked by: JJR

DT-10
PEDESTRIAN RAMP DETAILS
DALE DRIVE
SHARED USE PATH

0 30' 60'

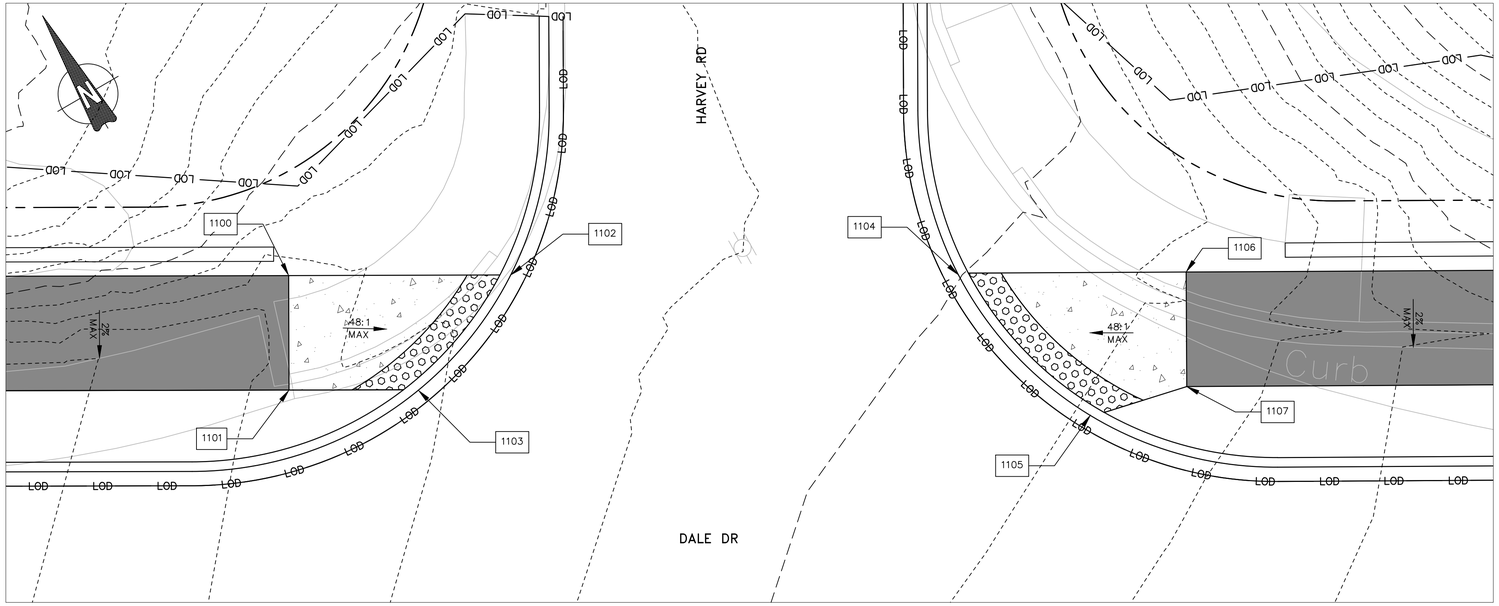
SCALE: 1"=30'

DATE: NOVEMBER 2022

CIP No.: 502109

SHEET 19 of 181

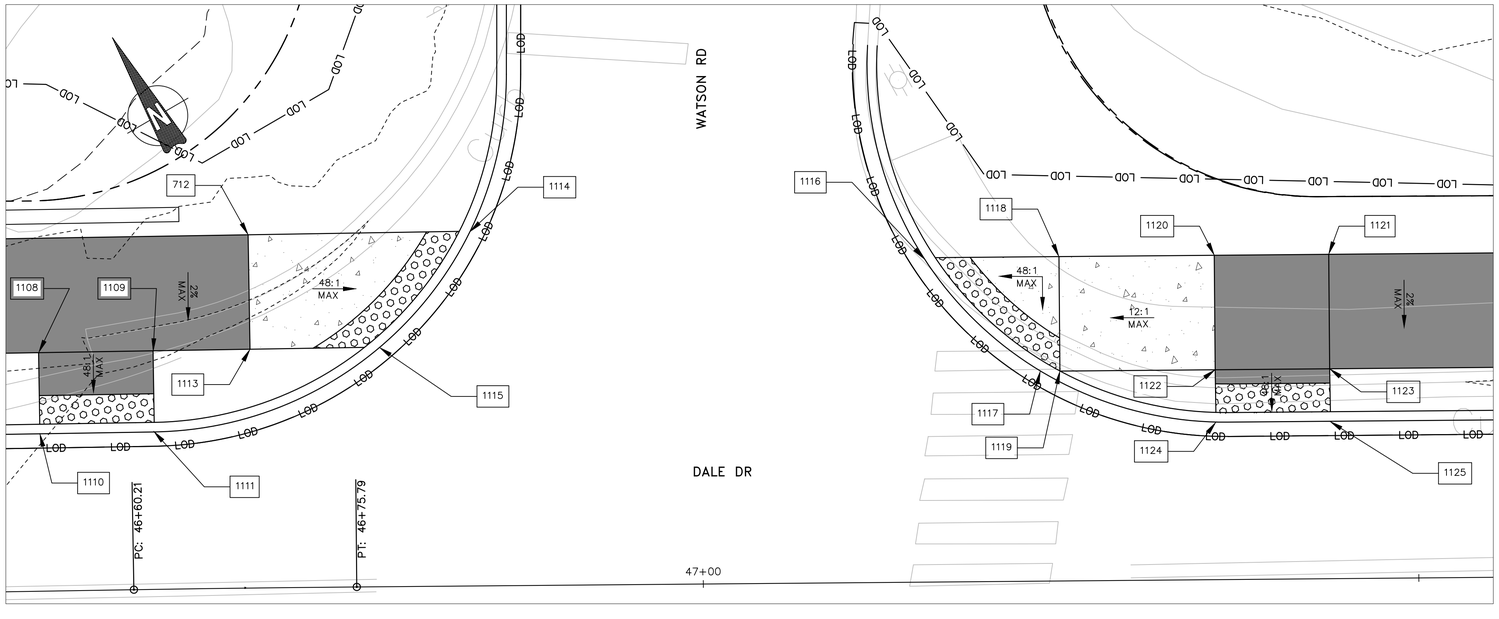
FILE NAME: Q:\2018\1804565_001_Dale_Drive_Pedestria\CADD\pDT-Dale.dwg LAYOUT NAME: DT-10 PLOTTED: Tuesday, November 22, 2022 - 7:04pm USER: AHavener



42+50 LT

43+00 LT

POINT TABLE				
POINT	NORTHING	EASTING	ELEVATION	DESCRIPTION
1100	488068.19	1304849.11	288.70	TOP OF LANDING
1101	488061.20	1304845.22	288.12	TOP OF LANDING
1102	488060.62	1304862.64	288.39	ROADWAY FLOWLINE
1103	488056.78	1304853.10	287.93	ROADWAY FLOWLINE
1104	488045.33	1304889.95	289.97	ROADWAY FLOWLINE
1105	488035.30	1304891.73	291.11	ROADWAY FLOWLINE
1106	488037.73	1304903.93	290.29	TOP OF LANDING
1107	488030.74	1304900.05	291.25	TOP OF LANDING



46+58 LT

46+75 LT

47+25 LT

47+40 LT

POINT TABLE				
POINT	NORTHING	EASTING	ELEVATION	DESCRIPTION
1108	487865.05	1305203.84	313.09	TOP OF LANDING
1109	487861.25	1305210.88	313.25	TOP OF LANDING
1110	487860.06	1305201.15	312.98	ROADWAY FLOWLINE
1111	487860.06	1305208.19	313.14	ROADWAY FLOWLINE
1112	487865.07	1305220.65	313.60	TOP OF LANDING
1113	487858.03	1305216.85	313.44	TOP OF LANDING
1114	487857.68	1305234.25	313.29	ROADWAY FLOWLINE
1115	487853.71	1305224.80	313.26	ROADWAY FLOWLINE
1116	487840.58	1305261.04	313.36	ROADWAY FLOWLINE
1117	487829.66	1305264.29	313.33	ROADWAY FLOWLINE
1118	487836.03	1305269.31	313.52	TOP OF LANDING
1119	487829.02	1305265.46	313.36	BACK OF CURB
1120	487830.80	1305278.83	313.57	TOP OF RAMP
1121	487826.95	1305285.83	313.52	TOP OF RAMP
1122	487823.79	1305274.97	313.41	TOP OF LANDING
1123	487819.95	1305281.98	313.22	TOP OF LANDING
1124	487820.57	1305273.23	313.24	ROADWAY FLOWLINE
1125	487816.71	1305280.23	313.15	ROADWAY FLOWLINE

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NOT FOR CONSTRUCTION

NO.	REVISION	DATE	BY

MONTGOMERY COUNTY
DEPARTMENT OF TRANSPORTATION
GAITHERSBURG, MARYLAND

RECOMMENDED FOR APPROVAL

Chief, Design Section — Date

APPROVED

Chief, Division of Transportation Engineering — Date

Designed by: ADH Drawn by: KTL Checked by: JJR

DT-11
PEDESTRIAN RAMP DETAILS
DALE DRIVE
SHARED USE PATH

0 30' 60'

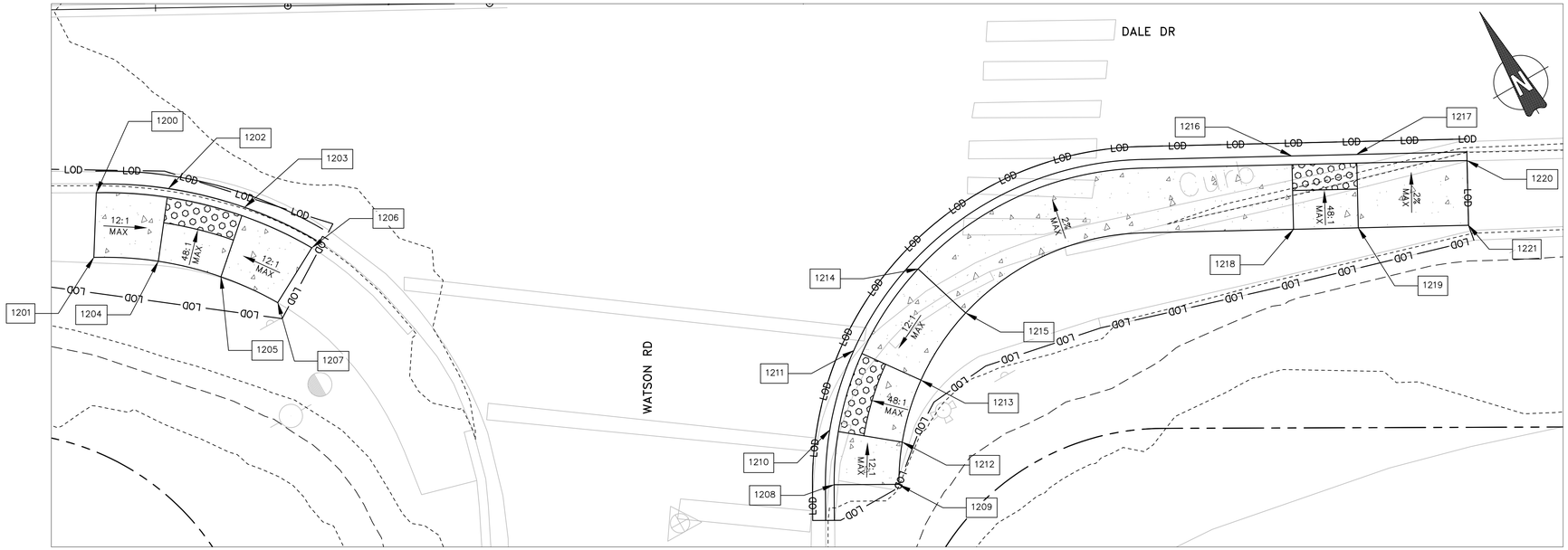
SCALE: 1"=30'

DATE: NOVEMBER 2022

CIP No.: 502109

SHEET 20 of 181

FILE NAME: Q:\2018\1804565_001_Dale_Drive_Pedestria\CADD\pDT-Dale.dwg LAYOUT NAME: DT-11 PLOTTED: Tuesday, November 22, 2022 - 7:04pm USER: AHavener

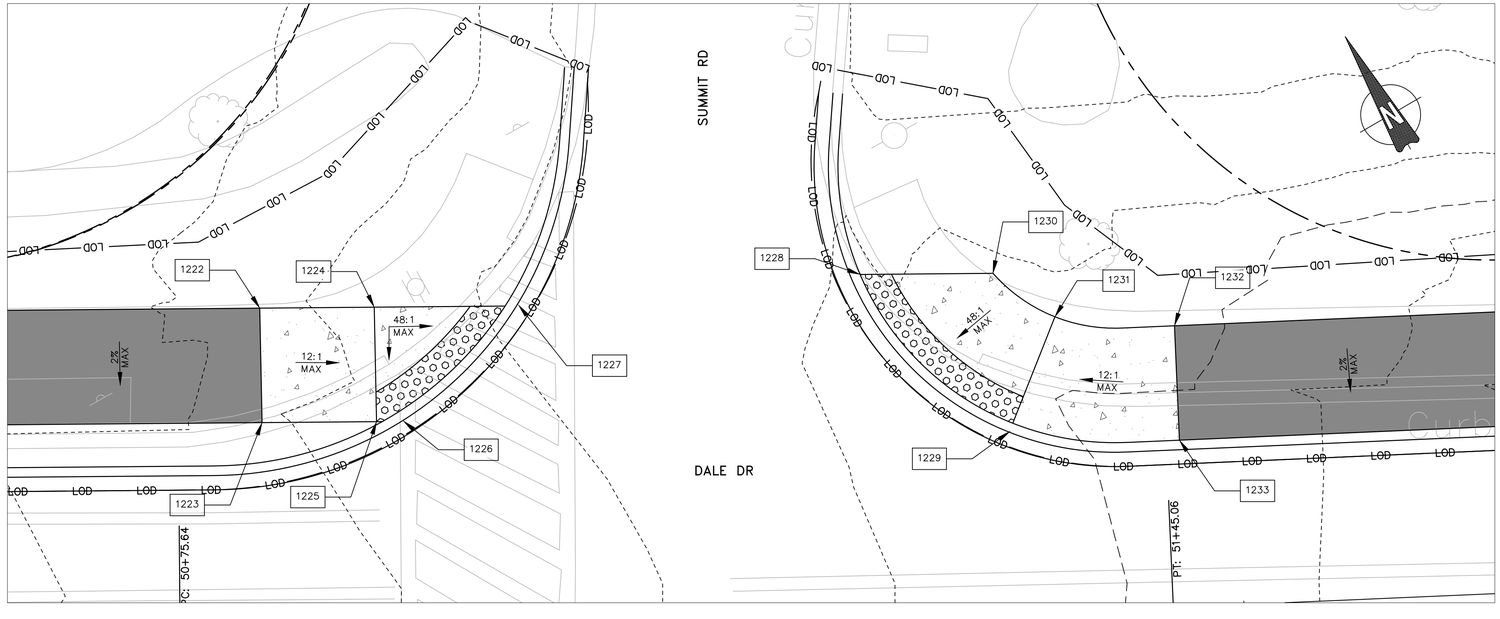


46+53 RT

47+00 RT

47+40 RT

POINT TABLE				
POINT	NORTHING	EASTING	ELEVATION	DESCRIPTION
1200	487841.99	1305181.60	312.93	BACK OF CURB
1201	487837.72	1305178.99	313.03	TOP OF RAMP
1202	487839.54	1305186.61	312.50	ROADWAY FLOWLINE
1203	487835.40	1305191.03	312.67	ROADWAY FLOWLINE
1204	487835.03	1305183.18	312.61	TOP OF LANDING
1205	487831.62	1305186.81	312.78	TOP OF LANDING
1206	487830.14	1305194.02	312.98	BACK OF CURB
1207	487827.73	1304189.66	313.18	TOP RAMP
1208	487794.46	1305220.23	313.22	BACK OF CURB
1209	487792.03	1305224.60	313.68	TOP OF RAMP
1210	487798.28	1305221.99	313.42	ROADWAY FLOWLINE
1211	487794.75	1305226.43	313.46	ROADWAY FLOWLINE
1212	487802.75	1305226.62	313.53	BACK OF LANDING
1213	487798.22	1305230.03	313.57	BACK OF LANDING
1214	487805.82	1305234.04	313.76	BACK OF CURB
1215	487801.07	1305235.57	313.86	TOP OF RAMP
1216	487799.33	1305263.45	313.24	ROADWAY FLOWLINE
1217	487796.99	1305267.87	313.19	ROADWAY FLOWLINE
1218	487794.32	1305260.81	312.35	TOP OF LANDING
1219	487791.98	1305265.22	313.30	TOP OF LANDING
1220	487792.40	1305275.08	312.17	BACK OF CURB
1221	487787.98	1305272.74	312.11	TOP OF RAMP



50+90 LT

51+35 LT

POINT TABLE				
POINT	NORTHING	EASTING	ELEVATION	DESCRIPTION
1222	487664.36	1305581.58	308.79	TOP OF RAMP
1223	487657.30	1305577.81	308.75	TOP OF RAMP
1224	487660.50	1305588.59	307.10	TOP OF LANDING
1225	487653.45	1305584.82	307.57	TOP OF LANDING
1226	487652.61	1305586.34	307.54	ROADWAY FLOWLINE
1227	487655.71	1305597.30	306.90	ROADWAY FLOWLINE
1228	487646.24	1305618.69	305.24	BACK OF CURB
1229	487631.18	1305623.02	304.86	ROADWAY FLOWLINE
1230	487641.42	1305627.46	305.44	BACK OF LANDING
1231	487636.65	1305629.74	306.03	BACK OF LANDING
1232	487632.01	1305636.73	305.36	TOP OF RAMP
1233	487624.87	1305633.12	305.20	TOP OF RAMP

DRAFT
NOT FOR CONSTRUCTION

NO.	REVISION	DATE	BY

MONTGOMERY COUNTY
DEPARTMENT OF TRANSPORTATION
GAITHERSBURG, MARYLAND

RECOMMENDED FOR APPROVAL

Chief, Design Section — Date

APPROVED

Chief, Division of Transportation Engineering — Date

Designed by: ADH Drawn by: KTL Checked by: JJR

DT-12
PEDESTRIAN RAMP DETAILS
DALE DRIVE
SHARED USE PATH

0 30' 60'

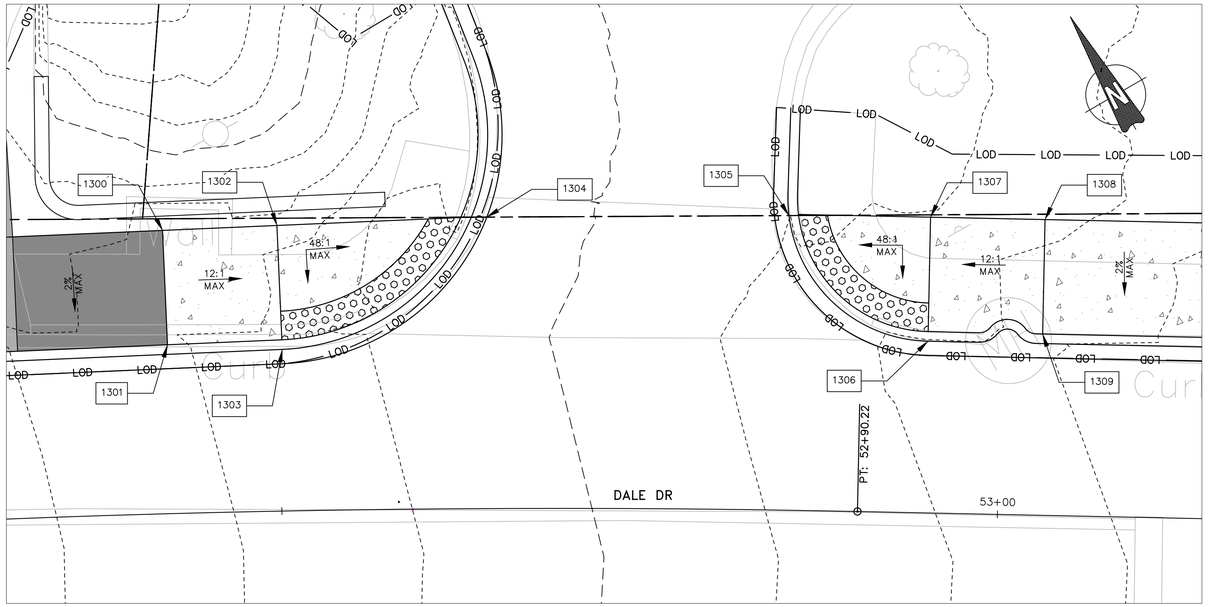
SCALE: 1"=30'

DATE: NOVEMBER 2022

CIP No.: 502109

SHEET 21 of 181

FILE NAME: Q:\2018\1804565_001_Dale_Drive_Pedestria\CADD\pDT-Dale.dwg LAYOUT NAME: DT-12 PLOTTED: Tuesday, November 22, 2022 - 7:04pm USER: AHavener



52+50 LT

52+90 LT

POINT TABLE				
POINT	NORTHING	EASTING	ELEVATION	DESCRIPTION
1300	487588.48	1305722.87	297.80	TOP OF RAMP
1301	487581.34	1305719.26	297.64	TOP OF RAMP
1302	487584.87	1305730.01	295.48	TOP OF LANDING
1303	487577.13	1305726.10	297.48	ROADWAY FLOWLINE
1304	487578.74	1305742.15	297.37	ROADWAY FLOWLINE
1305	487567.97	1305761.55	292.45	ROADWAY FLOWLINE
1306	487555.56	1305765.73	292.48	ROADWAY FLOWLINE
1307	487563.03	1305770.13	292.65	TOP OF LANDING
1308	487558.97	1305777.02	292.81	TOP OF RAMP
1309	487552.08	1305772.96	292.61	TOP OF RAMP

DRAFT
NOT FOR CONSTRUCTION

NO.	REVISION	DATE	BY

MONTGOMERY COUNTY
DEPARTMENT OF TRANSPORTATION
GAITHERSBURG, MARYLAND

RECOMMENDED FOR APPROVAL

Chief, Design Section — Date

APPROVED

Chief, Division of Transportation Engineering — Date

Designed by: ADH Drawn by: KTL Checked by: JJR

DT-13
PEDESTRIAN RAMP DETAILS
DALE DRIVE
SHARED USE PATH

0 30' 60'

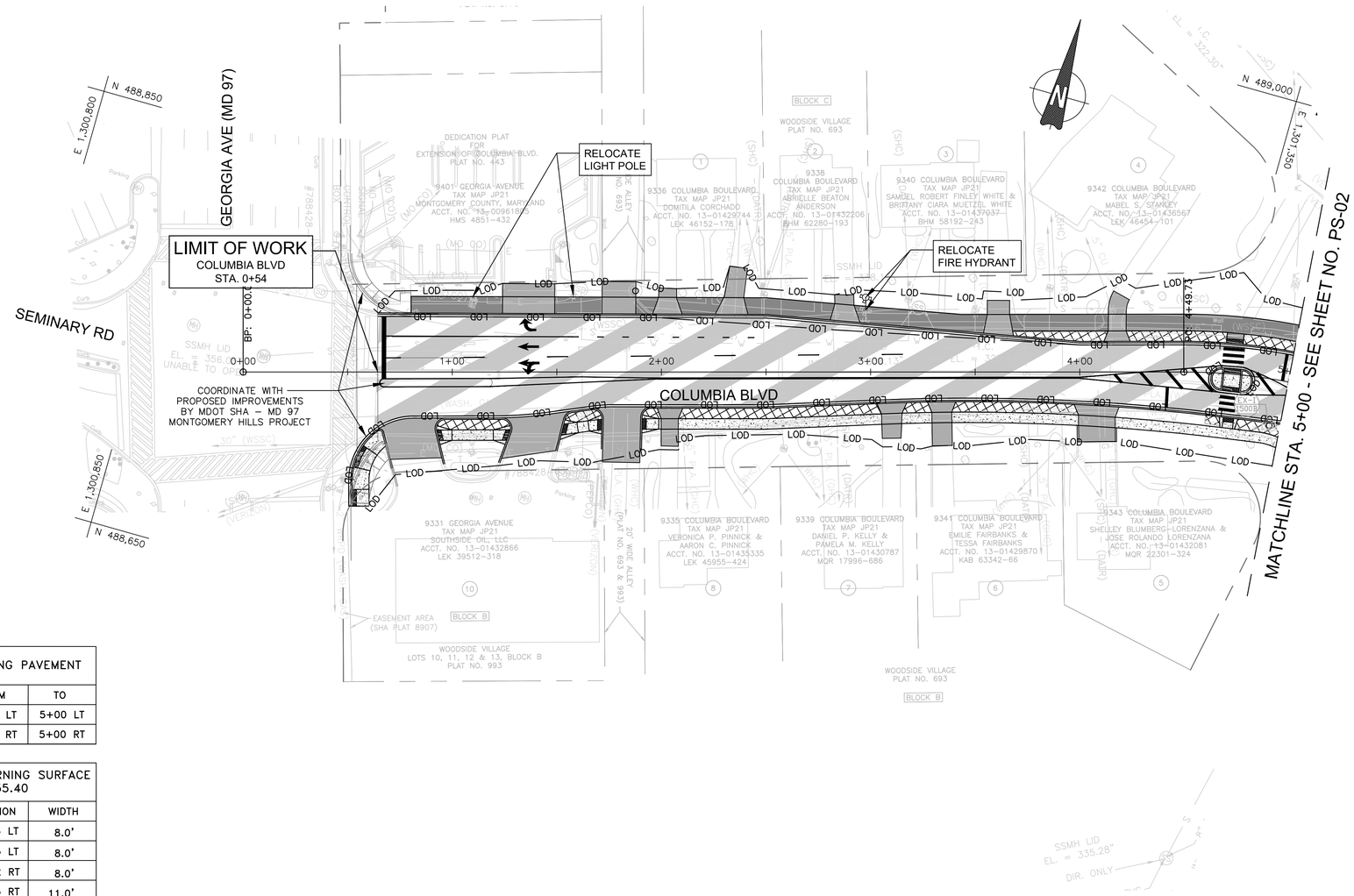
SCALE: 1"=30'

DATE: NOVEMBER 2022

CIP No. : 502109

SHEET 22 of 181

FILE NAME: Q:\2018\1804565_001_Dale_Drive_Pedestria\CADD\pDT-Dale.dwg LAYOUT NAME: DT-13 PLOTTED: Tuesday, November 22, 2022 - 7:05pm USER: AHavener



SIDEPATH		
QUANTITY	FROM	TO
2,662 SF	0+80 LT	5+00 LT

RESIDENTIAL SIDEWALK MC–110.01		
QUANTITY	FROM	TO
198 SF	4+62	4+85
1,963 SF	0+51 RT	5+00 RT

COMBINATION CONCRETE CURB AND GUTTER – TYPE A MC–100.01		
QUANTITY	FROM	TO
440 LF	0+65 LT	5+00 LT
60 LF	4+61	4+86
480 LF	0+51 RT	5+00 RT

RESIDENTIAL DRIVEWAY MC – 301.01		
QUANTITY	STATION	WIDTH
14 SY	2+03 LT	9.0'
26 SY	2+35 LT	9.0'
15 SY	2+87 LT	9.0'
21 SY	3+61 LT	11.0'
23 SY	4+15 LT	9.0'
18 SY	2+04 RT	8.0'
19 SY	3+10 RT	9.0'
24 SY	3+34 RT	10.0'
35 SY	4+08 RT	18.0'

COMMERCIAL DRIVEWAY MC – 302.01		
QUANTITY	STATION	WIDTH
40 SY	1+36 LT	25.0'
28 SY	1+80 LT	16.0'
52 SY	0+83 RT	24.0'
51 SY	1+37 RT	26.0'
54 SY	1+81 RT	18.0'

REMOVE EXISTING PAVEMENT		
QUANTITY	FROM	TO
538 SF	3+68 LT	5+00 LT
1,206 SF	0+93 RT	5+00 RT

DETECTABLE WARNING SURFACE MD–655.40		
QUANTITY	STATION	WIDTH
16 SF	4+73 LT	8.0'
16 SF	4+75 LT	8.0'
16 SF	0+52 RT	8.0'
22 SF	0+55 RT	11.0'
10 SF	0+95 RT	5.0'
11 SF	1+28 RT	5.0'
10 SF	1+55 RT	5.0'
10 SF	1+70 RT	5.0'
10 SF	1+93 RT	5.0'
11 SF	4+72 LT	5.0'
16 SF	4+75 RT	8.0'

MILL AND OVERLAY		
QUANTITY	FROM	TO
15,768 SF	0+70	5+00

LEGEND

- LOD — LIMIT OF DISTURBANCE
- LIMIT OF GRADING
- PROPOSED PAVEMENT MARKINGS
- TPF — TREE PROTECTION FENCE
- TCE — TEMPORARY CONSTRUCTION EASEMENT
- PE — PERPETUAL EASEMENT
- PROPOSED ASPHALT PATH/TRAIL–IMPERVIOUS
- PROPOSED FULL DEPTH ASPHALT PAVEMENT
- PROPOSED PERVIOUS PAVEMENT
- PROPOSED PAVEMENT REMOVAL
- PROPOSED RIP–RAP SLOPE STABILIZATION
- PROPOSED CONCRETE SIDEWALK

DRAFT
NOT FOR CONSTRUCTION

NO.	REVISION	DATE	BY

MONTGOMERY COUNTY
DEPARTMENT OF TRANSPORTATION
GAITHERSBURG, MARYLAND

RECOMMENDED FOR APPROVAL

Chief, Design Section — Date

APPROVED

Chief, Division of Transportation Engineering — Date

Designed by: ADH Drawn by: MED Checked by: JJR

PS–01
ROADWAY PLAN
DALE DRIVE
SHARED USE PATH

0 30' 60'

SCALE: 1"=30'

DATE: NOVEMBER 2022

CIP No. : 502109

SHEET 23 of 181

REMOVE EXISTING PAVEMENT		
QUANTITY	FROM	TO
652 SF	5+00 LT	101+29 LT
5,144 SF	102+73 RT	11+00 LT
935 SF	5+00 RT	5+17 RT
2,778 SF	5+59 RT	300+30 RT
1,000 SF	9+10 RT	10+00 RT
354 SF	10+34 RT	11+00 RT

FULL DEPTH PAVEMENT		
QUANTITY	FROM	TO
7,860 SF	100+20	102+90
584 SF	6+35 LT	7+08 LT
921 SF	7+30 RT	8+53 RT
217 SF	300+17	300+30

DETECTABLE WARNING SURFACE MD-655.40		
QUANTITY	STATION	WIDTH
23 SF	5+42 LT	8.0'
15 SF	100+71 LT	6.0'
21 SF	5+95 LT	8.0'
20 SF	6+13 LT	10.0'
16 SF	6+14 LT	8.0'
16 SF	9+80 LT	8.0'
16 SF	9+81 LT	8.0'
12 SF	5+13 RT	5.0'
10 SF	5+62 RT	8.0'
20 SF	6+13 RT	10.0'
10 SF	6+14 RT	8.0'
16 SF	9+80 RT	8.0'
16 SF	9+81 RT	8.0'
12 SF	301+51 LT	5.0'
10 SF	301+58 LT	5.0'
20 SF	301+83 LT	8.0'
11 SF	301+90 LT	5.0'
12 SF	301+51 RT	5.0'
10 SF	301+58 RT	5.0'
10 SF	301+81 RT	5.0'
14 SF	301+86 RT	5.0'

MILL AND OVERLAY		
QUANTITY	FROM	TO
21,767 SF	5+00	11+00

RESIDENTIAL DRIVEWAY MC – 301.01		
QUANTITY	STATION	WIDTH
67 SY	101+85 RT	12.0'
11 SY	102+77 RT	8.0'
46 SY	7+40 LT	10.0'
38 SY	8+00 LT	10.0'
61 SY	8+80 LT	10.0'
28 SY	10+56 LT	11.0'
20 SY	7+47 RT	12.0'
23 SY	7+87 RT	12.0'
10 SY	8+38 RT	9.0'
19 SY	9+21 RT	10.0'
24 SY	300+93 RT	10.0'

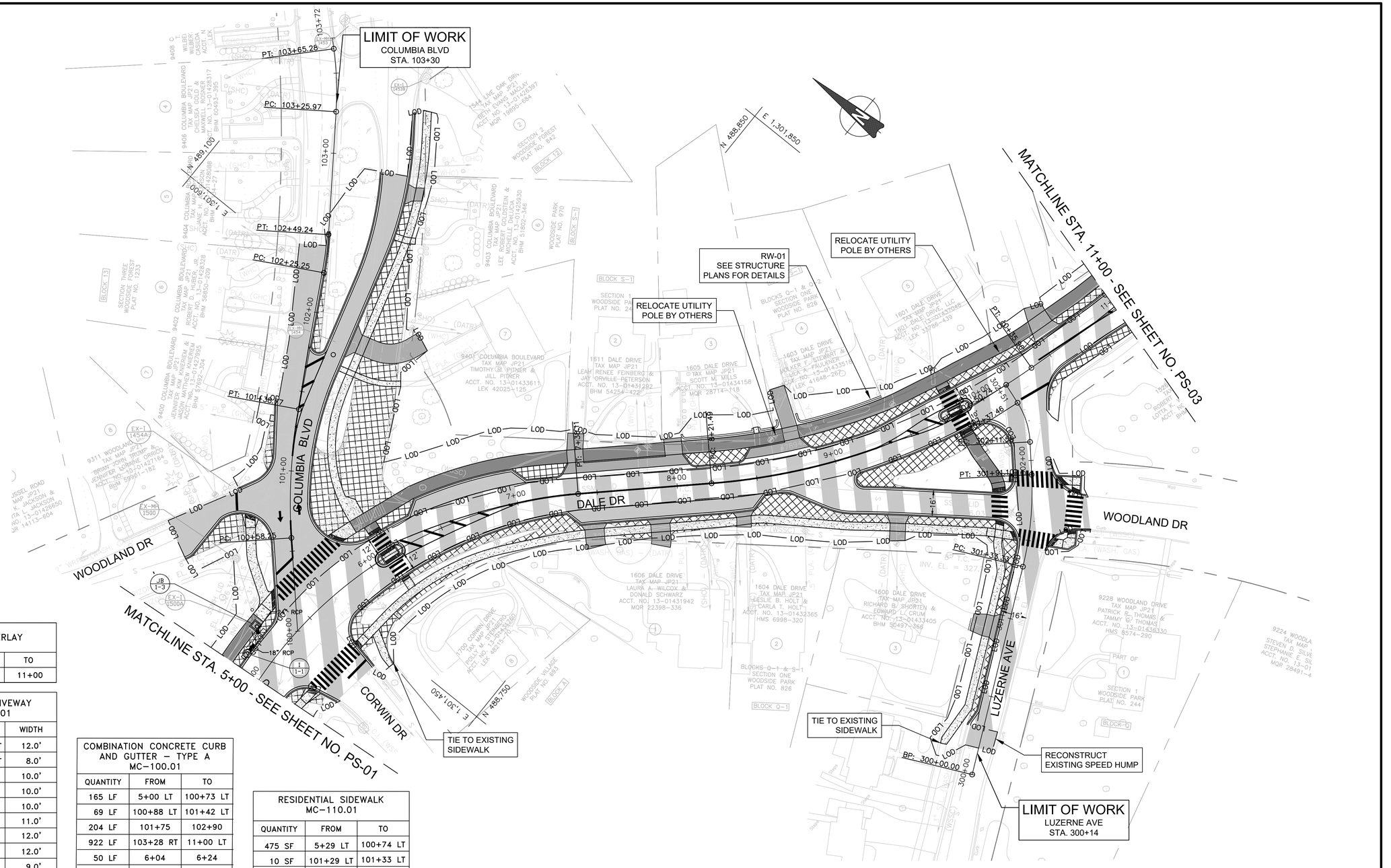
COMBINATION CONCRETE CURB AND GUTTER – TYPE A MC–100.01		
QUANTITY	FROM	TO
165 LF	5+00 LT	100+73 LT
69 LF	100+88 LT	101+42 LT
204 LF	101+75	102+90
922 LF	103+28 RT	11+00 LT
50 LF	6+04	6+24
52 LF	9+78	9+93
38 LF	5+00 RT	5+20 RT
608 LF	5+58 RT	300+30 LT
247 LF	9+08 RT	9+98 RT
33 LF	301+46 RT	301+61 RT
98 LF	301+78 RT	11+00 RT

SIDEPATH		
QUANTITY	FROM	TO
256 SF	5+00 LT	5+30 LT
3,820 SF	6+04 LT	11+00 LT
362 SF	5+78 RT	9+86 RT

RESIDENTIAL SIDEWALK MC–110.01		
QUANTITY	FROM	TO
475 SF	5+29 LT	100+74 LT
10 SF	101+29 LT	101+33 LT
1,446 SF	6+13 LT	103+26 RT
10 SF	8+53 LT	8+57 LT
10 SF	9+78 LT	9+82 LT
124 SF	6+05	6+23
114 SF	9+71	9+92
252 SF	5+00 RT	5+78 RT
2,715 SF	5+60 RT	300+14 RT
102 SF	301+50 LT	301+60 LT
85 SF	5+60 RT	300+14 RT
32 SF	301+87 LT	301+92 LT

LEGEND

- LOD — LIMIT OF DISTURBANCE
- LIMIT OF GRADING
- PROPOSED PAVEMENT MARKINGS
- TPF — TREE PROTECTION FENCE
- TCE — TEMPORARY CONSTRUCTION EASEMENT
- PE — PERPETUAL EASEMENT
- PROPOSED ASPHALT PATH/TRAIL–IMPERVIOUS
- PROPOSED FULL DEPTH ASPHALT PAVEMENT
- PROPOSED PERVIOUS PAVEMENT
- PROPOSED PAVEMENT REMOVAL
- PROPOSED RIP–RAP SLOPE STABILIZATION
- PROPOSED CONCRETE SIDEWALK



DRAFT
NOT FOR CONSTRUCTION

JMT

NO.	REVISION	DATE	BY

MONTGOMERY COUNTY
DEPARTMENT OF TRANSPORTATION
GAITHERSBURG, MARYLAND

RECOMMENDED FOR APPROVAL

Chief, Design Section — Date

APPROVED

Chief, Division of Transportation Engineering — Date

Designed by: ADH Drawn by: ADH Checked by: JJR

PS–02
ROADWAY PLAN

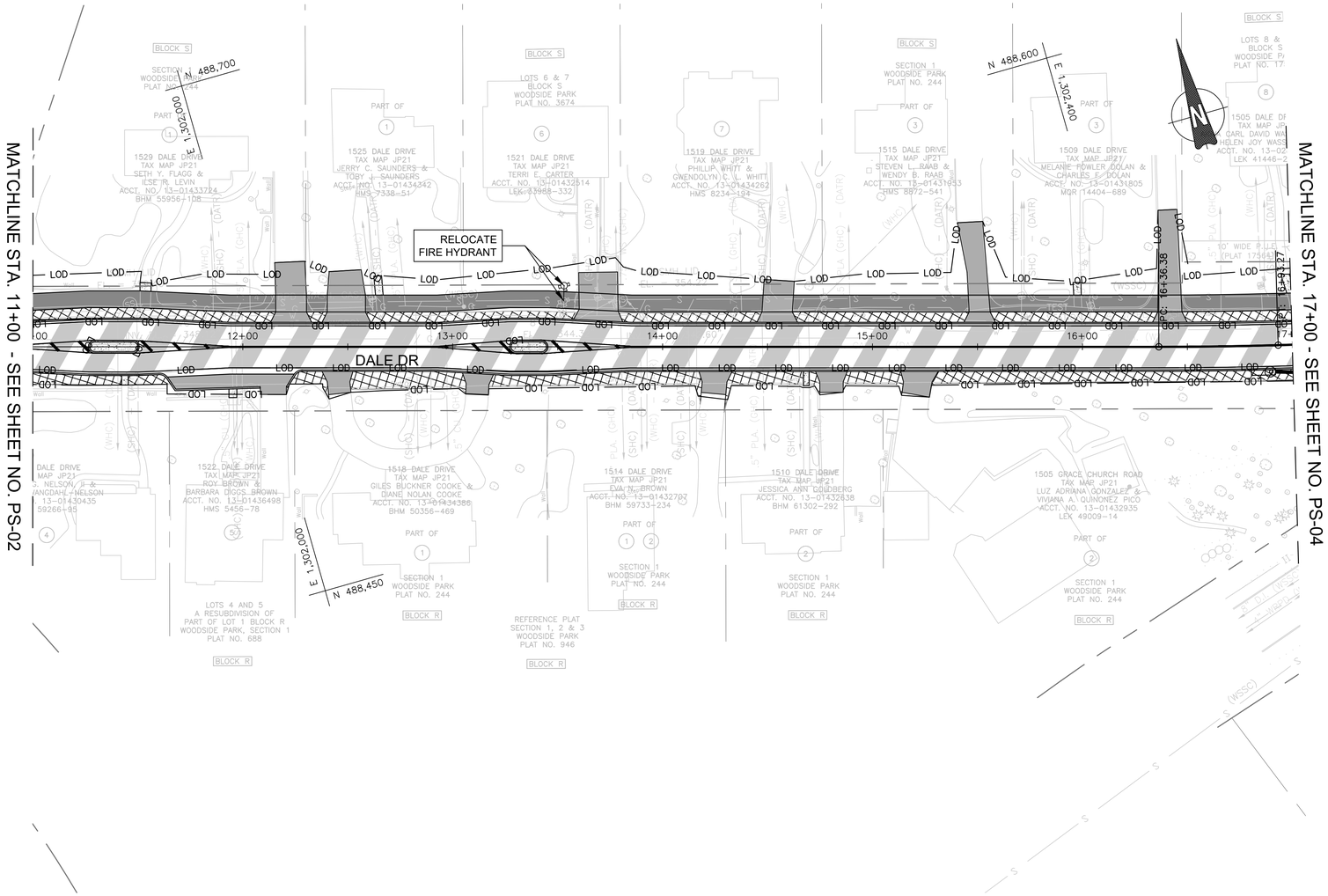
DALE DRIVE SHARED USE PATH

0 30' 60'

SCALE: 1"=30' DATE: NOVEMBER 2022

CIP No. : 502109 SHEET 24 of 181

FILE NAME: Q:\2018\1804565_001_Dale_Drive_Pedestria\CADD\pHD_Dale.dwg LAYOUT NAME: PS-02 PLOTTED: Tuesday, November 22, 2022 – 7:06pm USER: AHovener



SIDEPATH		
QUANTITY	FROM	TO
4,100 SF	11+00 LT	17+00 LT

COMBINATION CONCRETE CURB AND GUTTER – TYPE A MC–100.01		
QUANTITY	FROM	TO
600 LF	11+00 LT	17+00 LT
55 LF	11+26	11+51
43 LF	13+27	13+46
660 LF	11+00 RT	17+00 RT

RESIDENTIAL SIDEWALK MC–110.01		
QUANTITY	FROM	TO
21 SF	11+51 LT	11+56 LT
33 SF	12+63 LT	12+66 LT
22 SF	15+96 LT	15+99 LT
37 SF	16+96 LT	17+02 LT
137 SF	11+26	11+51
102 SF	13+27	13+45
14 SF	11+42 RT	11+45 RT
16 SF	11+93 RT	11+97 RT
18 SF	14+67 RT	14+70 RT

MILL AND OVERLAY		
QUANTITY	FROM	TO
12,201 SF	11+00	17+00

RESIDENTIAL DRIVEWAY MC – 301.01		
QUANTITY	STATION	WIDTH
43 SY	11+94 LT	13.0'
48 SY	12+21 LT	14.0'
49 SY	12+47 LT	15.0'
49 SY	13+78 LT	18.0'
33 SY	14+54 LT	15.0'
56 SY	15+48 LT	10.0'
63 SY	16+40 LT	12.0'
14 SY	12+46 RT	11.0'
13 SY	13+12 RT	11.0'
15 SY	14+26 RT	12.0'
13 SY	14+80 RT	11.0'
18 SY	15+20 RT	14.0'

REMOVE EXISTING PAVEMENT		
QUANTITY	FROM	TO
2,375 SF	11+00 LT	17+00 LT
2,792 SF	11+00 RT	17+00 RT

LEGEND

- LOD — LIMIT OF DISTURBANCE
- LIMIT OF GRADING
- PROPOSED PAVEMENT MARKINGS
- TPF — TREE PROTECTION FENCE
- TCE — TEMPORARY CONSTRUCTION EASEMENT
- PE — PERPETUAL EASEMENT
- PROPOSED ASPHALT PATH/TRAIL–IMPERVIOUS
- PROPOSED FULL DEPTH ASPHALT PAVEMENT
- PROPOSED PERVIOUS PAVEMENT
- PROPOSED PAVEMENT REMOVAL
- PROPOSED RIP–RAP SLOPE STABILIZATION
- PROPOSED CONCRETE SIDEWALK

DRAFT
NOT FOR CONSTRUCTION

NO.	REVISION	DATE	BY

MONTGOMERY COUNTY
DEPARTMENT OF TRANSPORTATION
GAITHERSBURG, MARYLAND

RECOMMENDED FOR APPROVAL

Chief, Design Section — Date

APPROVED

Chief, Division of Transportation Engineering — Date

Designed by: ADH Drawn by: MED Checked by: JJR

PS–03
ROADWAY PLAN
DALE DRIVE SHARED USE PATH

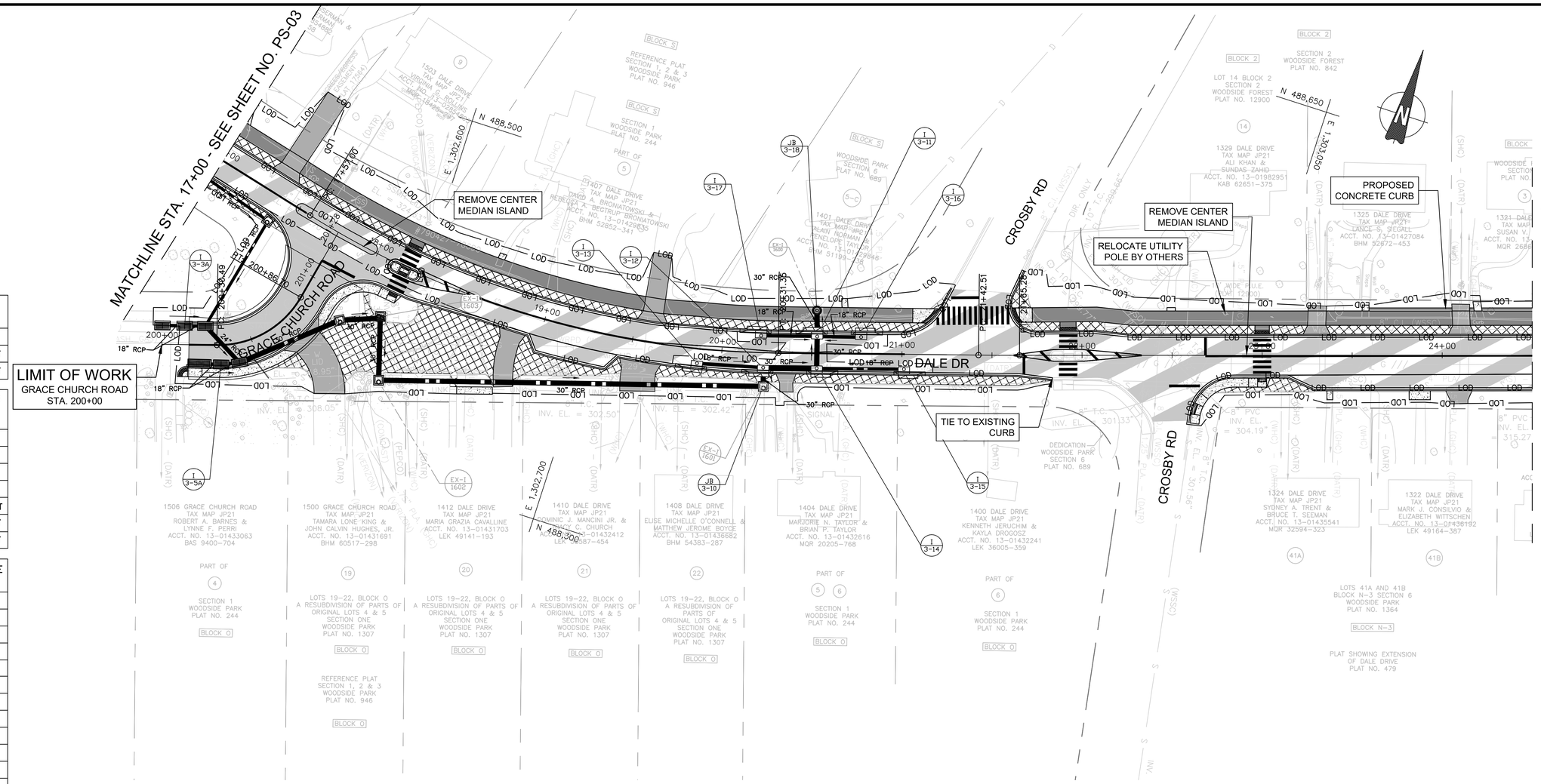
0 30' 60'

SCALE: 1"=30'

DATE: NOVEMBER 2022

CIP No. : 502109

SHEET 25 of 181



SIDEPATH		
QUANTITY	FROM	TO
2,996 SF	17+00 LT	21+04 LT
2,149 SF	21+71 LT	24+50 LT

COMBINATION CONCRETE CURB AND GUTTER – TYPE A MC–100.01		
QUANTITY	FROM	TO
433 LF	17+00 LT	21+26 LT
320 LF	21+58 LT	24+50 LT
47 LF	18+08	18+27
145 LF	17+00 RT	200+15 LT
522 LF	200+15 RT	21+82 RT
212 LF	22+58 RT	24+50 RT

DETECTABLE WARNING SURFACE MD–655.40		
QUANTITY	STATION	WIDTH
16 SF	18+17 LT	8.0'
10 SF	18+18 LT	5.0'
23 SF	21+16 LT	8.0'
18 SF	21+63 LT	8.0'
18 SF	21+92 LT	8.0'
16 SF	23+00 LT	8.0'
10 SF	200+16 RT	5.0'
10 SF	18+17 RT	5.0'
10 SF	18+18 RT	5.0'
12 SF	22+63 RT	6.0'
10 SF	23+00 RT	5.0'

RESIDENTIAL DRIVEWAY MC – 301.01		
QUANTITY	STATION	WIDTH
70 SY	17+32 LT	12.0'
47 SY	19+58 LT	10.0'
19 SY	23+29 LT	10.0'
19 SY	24+09 LT	11.0'
73 SY	200+72 RT	17.0'
39 SY	18+85 RT	11.0'
36 SY	19+56 RT	19.0'
9 SY	20+35 RT	8.0'
9 SY	24+08 RT	10.0'

REMOVE EXISTING PAVEMENT		
QUANTITY	FROM	TO
1,842 SF	17+00 LT	21+25 LT
1,260 SF	21+59 LT	24+50 LT
222 SF	17+00 RT	17+49 RT
4,905 SF	17+68 RT	21+82 RT
215 SF	22+58 RT	23+27 RT

RESIDENTIAL SIDEWALK MC–110.01		
QUANTITY	FROM	TO
11 SF	18+64 LT	18+68 LT
11 SF	20+66 LT	20+69 LT
95 SF	21+06 LT	21+20 LT
81 SF	21+61 LT	21+72 LT
8 SF	22+48 LT	22+51 LT
12 SF	23+54 LT	23+60 LT
15 SF	24+18 LT	24+23 LT
94 SF	18+09	18+26
571 SF	200+14 RT	18+22 RT
79 SF	18+66 RT	18+85 RT
271 SF	22+60 RT	23+05 RT
16 SF	23+36 RT	23+39 RT
60 SF	23+82 RT	23+93 RT

FULL DEPTH PAVEMENT		
QUANTITY	FROM	TO
2,964 SF	200+15	201+19

MILL AND OVERLAY		
QUANTITY	FROM	TO
18,685 SF	17+00	24+50

LEGEND

- LOD — LIMIT OF DISTURBANCE
- LIMIT OF GRADING
- PROPOSED PAVEMENT MARKINGS
- TPF — TREE PROTECTION FENCE
- TCE — TEMPORARY CONSTRUCTION EASEMENT
- PE — PERPETUAL EASEMENT
- PROPOSED ASPHALT PATH/TRAIL–IMPERVIOUS
- PROPOSED FULL DEPTH ASPHALT PAVEMENT
- PROPOSED PERVIOUS PAVEMENT
- PROPOSED PAVEMENT REMOVAL
- PROPOSED RIP–RAP SLOPE STABILIZATION
- PROPOSED CONCRETE SIDEWALK

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MONTGOMERY COUNTY
DEPARTMENT OF TRANSPORTATION
GAITHERSBURG, MARYLAND

RECOMMENDED FOR APPROVAL

Chief, Design Section — Date

APPROVED

Chief, Division of Transportation Engineering — Date

Designed by: ADH Drawn by: MED Checked by: JJR

PS–04
ROADWAY PLAN
DALE DRIVE
SHARED USE PATH

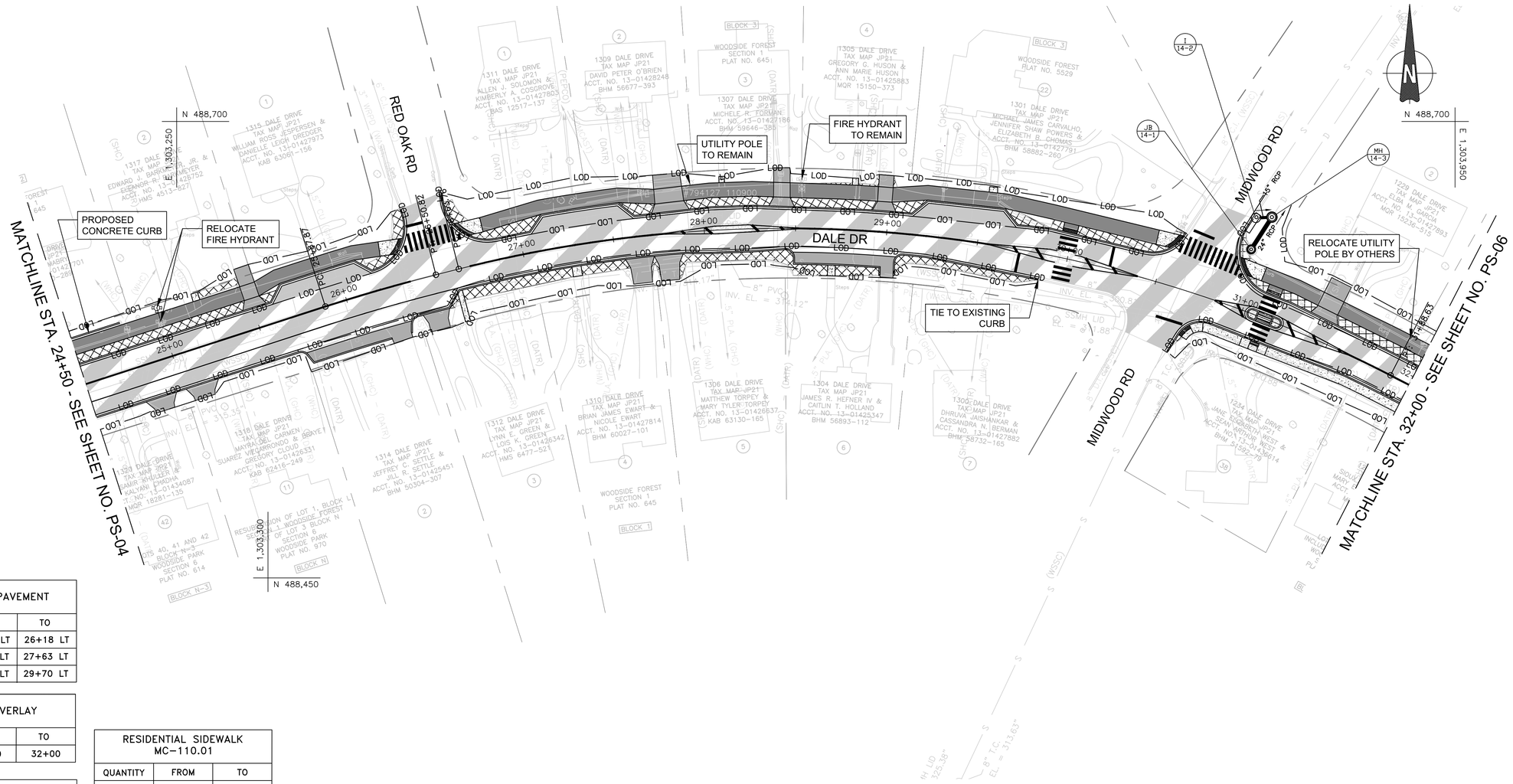
0 30' 60'

SCALE: 1"=30'

DATE: NOVEMBER 2022

CIP No. : 502109

SHEET 26 of 181



SIDEPATH		
QUANTITY	FROM	TO
1,341 SF	24+50 LT	26+23 LT
2,777 SF	26+80 LT	30+43 LT
731 SF	31+05 LT	32+00 LT

COMBINATION CONCRETE CURB AND GUTTER – TYPE A MC–100.01		
QUANTITY	FROM	TO
218 LF	24+50 LT	26+40 LT
448 LF	26+63 LT	30+57 LT
145 LF	30+87 LT	32+00 LT
53 LF	31+02	31+24
545 LF	24+50 RT	29+85 RT
146 LF	30+66 RT	32+00 RT

REMOVE EXISTING PAVEMENT		
QUANTITY	FROM	TO
748 SF	24+50 LT	26+39 LT
1,330 SF	26+63 LT	30+56 LT
455 SF	30+92 LT	32+00 LT
1,401 SF	26+55 RT	30+45 RT

RESIDENTIAL DRIVEWAY MC – 301.01		
QUANTITY	STATION	WIDTH
23 SY	25+50 LT	9.0'
37 SY	27+80 LT	15.0'
23 SY	28+41 LT	9.0'
19 SY	28+96 LT	8.0'
30 SY	31+42 LT	12.0'
11 SY	24+86 RT	10.0'
12 SY	25+09 RT	11.0'
43 SY	26+10 RT	11.0'
13 SY	26+45 RT	11.0'
18 SY	27+62 RT	10.0'
18 SY	27+78 RT	10.0'
41 SY	28+83 RT	7.0'

FULL DEPTH PAVEMENT		
QUANTITY	FROM	TO
400 SF	25+60 LT	26+18 LT
413 SF	27+06 LT	27+63 LT
397 SF	29+13 LT	29+70 LT

MILL AND OVERLAY		
QUANTITY	FROM	TO
21,200 SF	24+50	32+00

DETECTABLE WARNING SURFACE MD–655.40		
QUANTITY	STATION	WIDTH
20 SF	26+45 LT	8.0'
22 SF	26+71 LT	8.0'
16 SF	29+97 LT	8.0'
20 SF	30+55 LT	8.0'
22 SF	30+94 LT	8.0'
16 SF	31+12 LT	8.0'
16 SF	31+13 LT	8.0'
15 SF	30+75 RT	8.0'
16 SF	31+13 RT	8.0'
10 SF	31+14 RT	5.0'

RESIDENTIAL SIDEWALK MC–110.01		
QUANTITY	FROM	TO
16 SF	25+20 LT	25+24 LT
88 SF	26+25 LT	26+38 LT
94 SF	26+67 LT	26+82 LT
10 SF	28+08 LT	28+11 LT
12 SF	28+80 LT	28+83 LT
12 SF	29+52 LT	29+56 LT
89 SF	30+44 LT	30+57 LT
99 SF	30+89 LT	31+04 LT
112 SF	31+03	31+23
48 SF	26+60 RT	26+63 RT
27 SF	27+25 RT	27+30 RT
25 SF	28+68 RT	28+73 RT
642 SF	30+71 RT	32+00 RT

LEGEND

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- LIMIT OF GRADING
- PROPOSED PAVEMENT MARKINGS
- TPF — TREE PROTECTION FENCE
- TCE — TEMPORARY CONSTRUCTION EASEMENT
- PE — PERPETUAL EASEMENT
- PROPOSED ASPHALT PATH/TRAIL–IMPERVIOUS
- PROPOSED FULL DEPTH ASPHALT PAVEMENT
- PROPOSED PERVIOUS PAVEMENT
- PROPOSED PAVEMENT REMOVAL
- PROPOSED RIP–RAP SLOPE STABILIZATION
- PROPOSED CONCRETE SIDEWALK

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GAITHERSBURG, MARYLAND

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Chief, Division of Transportation Engineering — Date

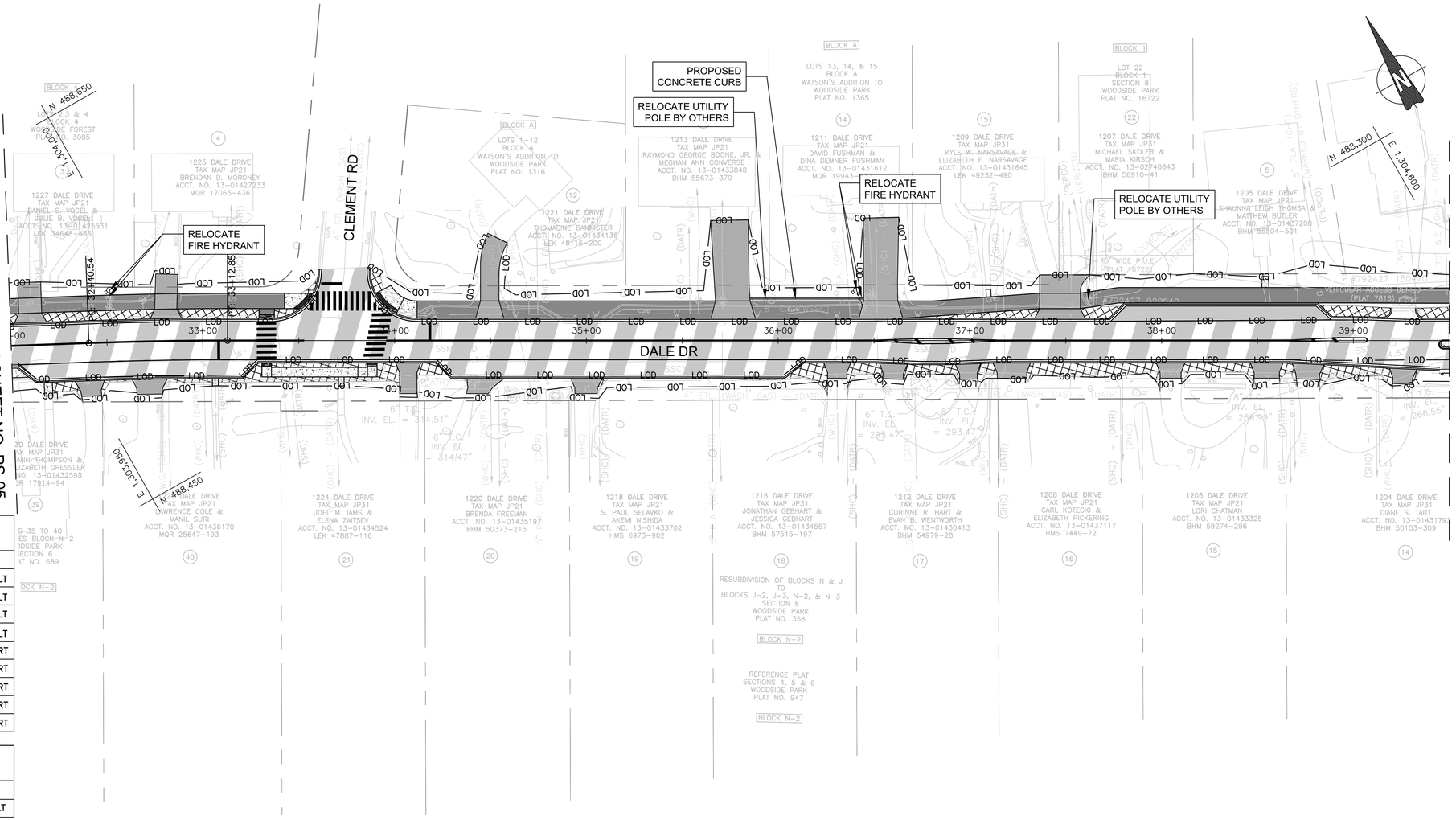
Designed by: ADH Drawn by: MED Checked by: JJR

PS–05
ROADWAY PLAN
DALE DRIVE SHARED USE PATH

0 30' 60'

SCALE: 1"=30' DATE: NOVEMBER 2022

CIP No. : 502109 SHEET 27 of 181



SIDEPATH		
QUANTITY	FROM	TO
998 SF	32+00 LT	33+41 LT
3,919 SF	34+10 LT	39+50 LT

COMBINATION CONCRETE CURB AND GUTTER – TYPE A MC–100.01		
QUANTITY	FROM	TO
177 LF	32+00 LT	33+60 LT
603 LF	33+85 LT	39+50 LT
762 LF	32+00 RT	39+50 RT
12 LF	39+45 RT	39+50 RT

REMOVE EXISTING PAVEMENT		
QUANTITY	FROM	TO
618 SF	32+00 LT	33+94 LT
542 SF	36+68 LT	39+50 LT
2,212 SF	32+00 RT	39+45 RT

RESIDENTIAL DRIVEWAY MC – 301.01		
QUANTITY	STATION	WIDTH
30 SY	32+09 LT	12.0'
32 SY	32+80 LT	12.0'
50 SY	34+48 LT	10.0'
108 SY	35+74 LT	18.0'
108 SY	36+50 LT	18.0'
56 SY	37+45 LT	21.0'
11 SY	32+39 RT	10.0'
13 SY	32+70 RT	13.0'
17 SY	34+06 RT	9.0'
13 SY	34+42 RT	10.0'
12 SY	34+98 RT	12.0'
10 SY	36+29 RT	10.0'
11 SY	36+58 RT	11.0'
9 SY	36+98 RT	9.0'
15 SY	37+20 RT	15.0'
11 SY	38+03 RT	11.0'
13 SY	38+53 RT	13.0'
12 SY	38+75 RT	12.0'
10 SY	39+24 RT	10.0'

RESIDENTIAL SIDEWALK MC–110.01		
QUANTITY	FROM	TO
95 SF	33+43 LT	33+57 LT
194 SF	33+90 LT	34+12 LT
10 SF	37+08 LT	37+12 LT
21 SF	38+52 LT	38+56 LT
28 SF	32+00 RT	32+09 RT
30 SF	32+17 RT	32+21 RT
13 SF	33+05 RT	33+09 RT
337 SF	33+31 RT	33+91 RT
11 SF	39+45 RT	30+50 RT

FULL DEPTH PAVEMENT		
QUANTITY	FROM	TO
815 SF	37+72 LT	38+87 LT

MILL AND OVERLAY		
QUANTITY	FROM	TO
18,517 SF	32+00	39+50

DETECTABLE WARNING SURFACE MD–655.40		
QUANTITY	STATION	WIDTH
16 SF	33+32 LT	8.0'
22 SF	33+56 LT	8.0'
33 SF	33+95 LT	15.0'
10 SF	33+34 RT	5.0'
10 SF	33+88 RT	5.0'

TRAFFIC BARRIER W–BEAM MD–605.21		
QUANTITY	FROM	TO
5 LF	39+45	39+50

LEGEND

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- LIMIT OF GRADING
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- PROPOSED PAVEMENT REMOVAL
- PROPOSED RIP–RAP SLOPE STABILIZATION
- PROPOSED CONCRETE SIDEWALK

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DEPARTMENT OF TRANSPORTATION
GAITHERSBURG, MARYLAND

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Chief, Design Section — Date

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Chief, Division of Transportation Engineering — Date

Designed by: ADH Drawn by: MED Checked by: JJR

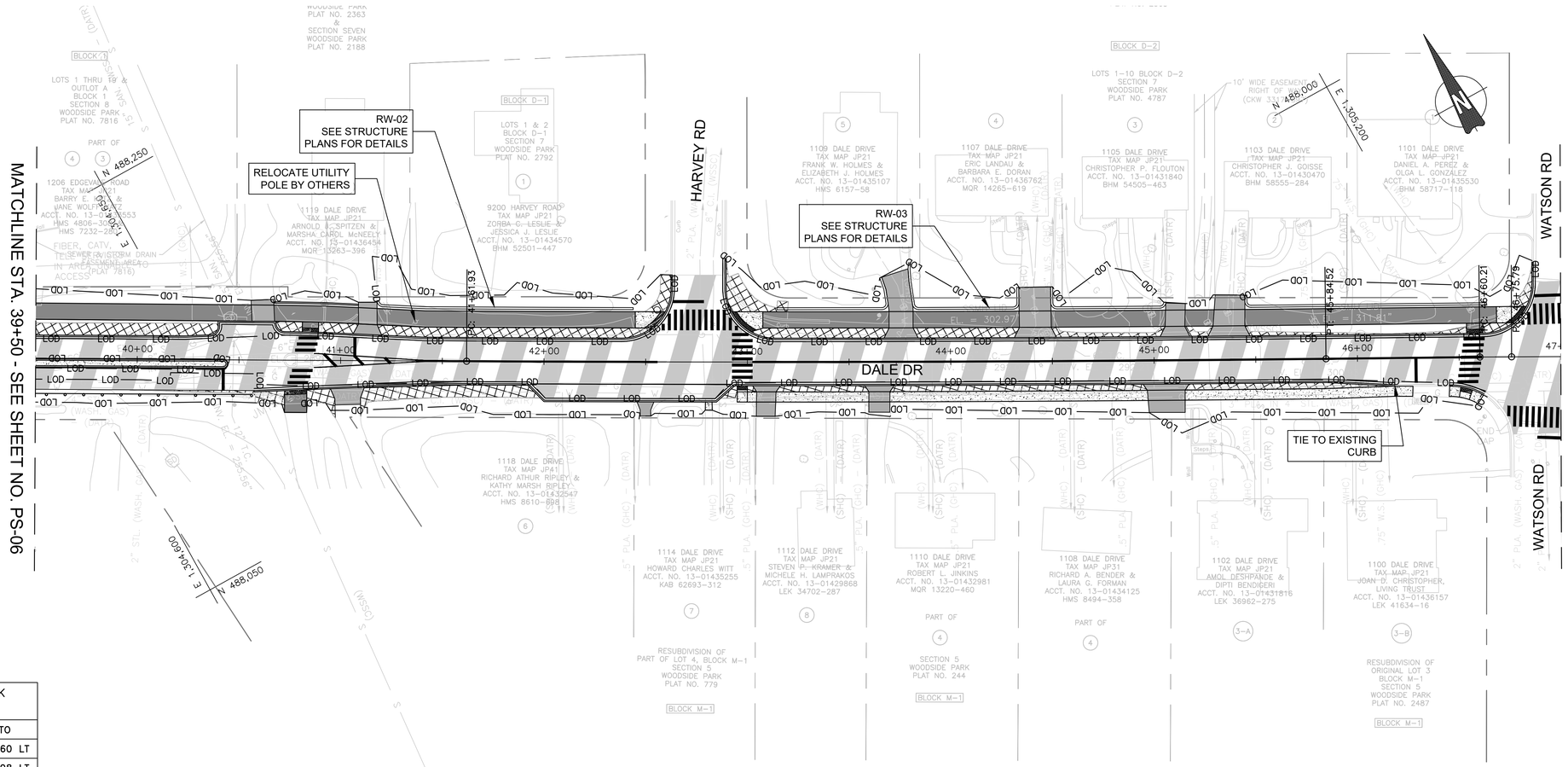
PS–06
ROADWAY PLAN

DALE DRIVE SHARED USE PATH

0 30' 60'

SCALE: 1"=30' DATE: NOVEMBER 2022

CIP No. : 502109 SHEET 28 of 181



SIDEPATH		
QUANTITY	FROM	TO
2,237 SF	39+50 LT	42+43 LT
2,507 SF	43+06 LT	46+67 LT
124 SF	40+73 RT	40+83 RT

COMBINATION CONCRETE CURB AND GUTTER – TYPE A MC-100.01		
QUANTITY	FROM	TO
340 LF	39+50 LT	42+62 LT
452 LF	42+87 LT	46+86 LT
153 LF	39+50 RT	40+45 RT
596 LF	40+57 RT	46+63 RT

DETECTABLE WARNING SURFACE MD-655.40		
QUANTITY	STATION	WIDTH
16 SF	40+81 LT	8.0'
22 SF	42+58 LT	8.0'
28 SF	42+99 LT	10.0'
16 SF	46+57 LT	8.0'
22 SF	46+82 LT	8.0'
22 SF	40+77 RT	8.0'
10 SF	42+98 RT	5.0'
11 SF	46+55 RT	6.0'

RESIDENTIAL DRIVEWAY MC – 301.01		
QUANTITY	STATION	WIDTH
13 SY	40+59 LT	11.0'
17 SY	41+11 LT	9.0'
44 SY	43+73 LT	12.0'
44 SY	44+40 LT	15.0'
30 SY	45+09 LT	10.0'
36 SY	45+36 LT	15.0'
12 SY	41+02 RT	12.0'
6 SY	42+48 RT	6.0'
17 SY	43+08 RT	11.0'
16 SY	43+63 RT	10.0'
29 SY	45+05 RT	18.0'

RESIDENTIAL SIDEWALK MC-110.01		
QUANTITY	FROM	TO
95 SF	42+45 LT	42+60 LT
106 SF	42+92 LT	43+08 LT
95 SF	46+69 LT	46+83 LT
95 SF	46+69 LT	46+83 LT
197 SF	39+50 RT	40+45 RT
1,486 SF	42+95 RT	43+08 RT
80 SF	46+45 RT	46+83 RT

MILL AND OVERLAY		
QUANTITY	FROM	TO
18,937 SF	39+50	47+00

TRAFFIC BARRIER W-BEAM MD-605.21		
QUANTITY	FROM	TO
108 LF	39+50	40+58

REMOVE EXISTING PAVEMENT		
QUANTITY	FROM	TO
1,457 SF	39+50 LT	42+60 LT
1,254 SF	42+89 LT	46+85 LT
770 SF	39+96 RT	42+00 RT
798 SF	42+87 RT	46+17 RT

LEGEND

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APPROVED

Chief, Division of Transportation Engineering — Date

Designed by: ADH Drawn by: MED Checked by: JJR

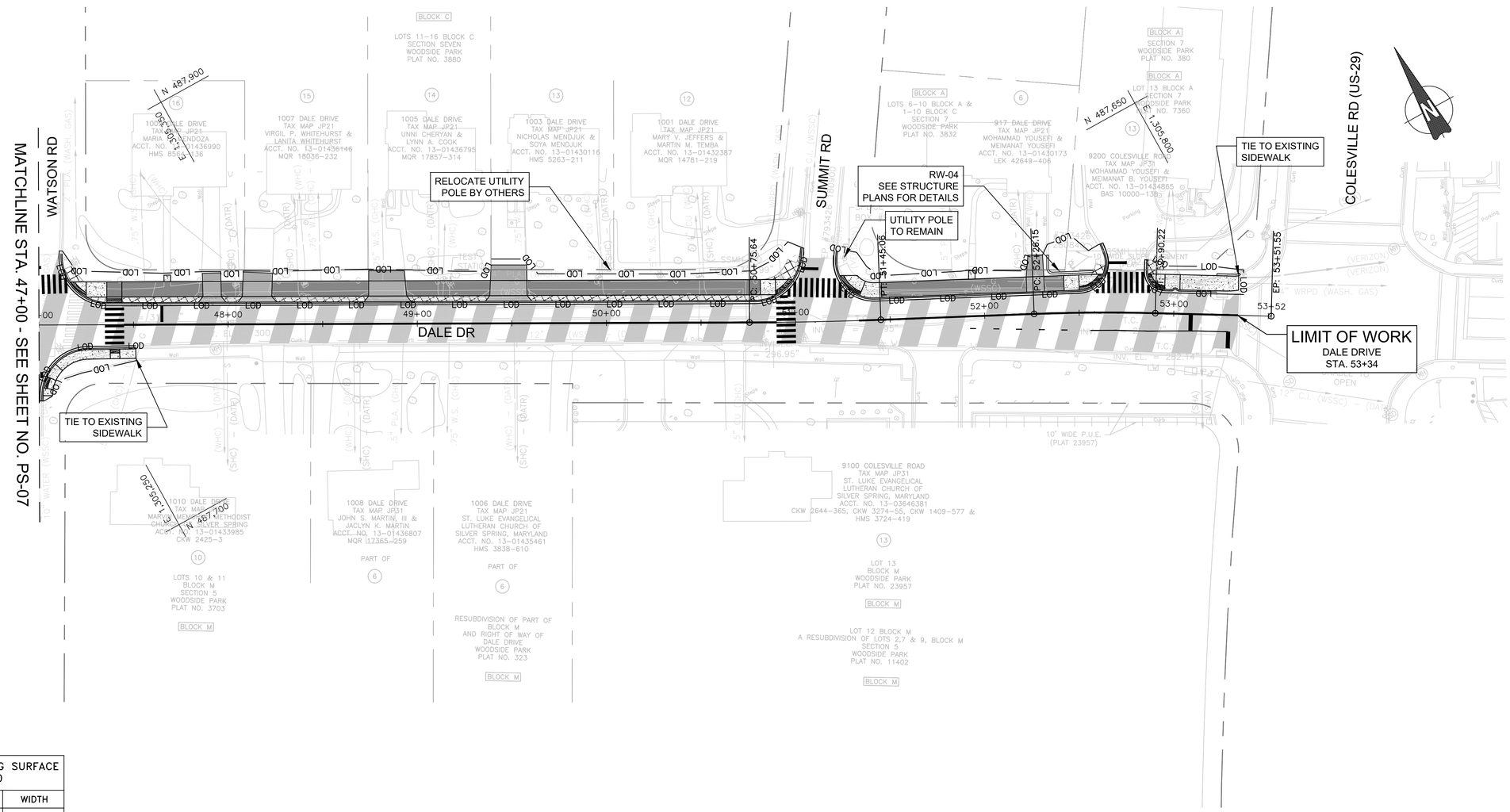
PS-07
ROADWAY PLAN
DALE DRIVE SHARED USE PATH

0 30' 60'

SCALE: 1"=30' DATE: NOVEMBER 2022

CIP No. : 502109 SHEET 29 of 181

FILE NAME: Q:\2018\1804565_001_Dale_Drive_Pedestria\CADD\pHD_Dale.dwg LAYOUT NAME: PS-07 PLOTTED: Tuesday, November 22, 2022 – 7:07pm USER: AHavener



SIDEPATH		
QUANTITY	FROM	TO
2,273 SF	47+36 LT	50+80 LT
697 SF	51+41 LT	52+40 LT

COMBINATION CONCRETE CURB AND GUTTER – TYPE A MC-100.01		
QUANTITY	FROM	TO
428 LF	47+10 LT	51+02 LT
184 LF	51+20 LT	52+62 LT
51 LF	52+84 LT	53+24 LT
67 LF	47+00 RT	47+50 RT

RESIDENTIAL SIDEWALK MC-110.01		
QUANTITY	FROM	TO
127 SF	47+16 LT	47+36 LT
12 SF	47+66 LT	47+68 LT
108 SF	50+81 LT	50+99 LT
164 SF	51+24 LT	51+46 LT
15 SF	51+92 LT	51+96 LT
138 SF	52+42 LT	52+63 LT
364 SF	52+86 LT	53+34 LT
295 SF	47+02 RT	47+51 RT

RESIDENTIAL DRIVEWAY MC – 301.01		
QUANTITY	STATION	WIDTH
18 SY	47+90 LT	10.0'
28 SY	48+15 LT	16.0'
37 SY	48+82 LT	20.0'
42 SY	49+47 LT	20.0'
19 SY	52+25 LT	8.0'

REMOVE EXISTING PAVEMENT		
QUANTITY	FROM	TO
923 SF	47+13 LT	51+03 LT
64 SF	52+56 LT	56+91 LT

DETECTABLE WARNING SURFACE MD-655.40		
QUANTITY	STATION	WIDTH
20 SF	47+20 LT	8.0'
16 SF	47+39 LT	8.0'
21 SF	50+99 LT	8.0'
28 SF	51+30 LT	13.0'
29 SF	52+56 LT	8.0'
24 SF	52+84 LT	8.0'
12 SF	47+01 RT	6.0'
10 SF	47+39 RT	5.0'

MILL AND OVERLAY		
QUANTITY	FROM	TO
16,014 SF	47+00	53+35

LEGEND

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- PROPOSED PAVEMENT REMOVAL
- PROPOSED RIP–RAP SLOPE STABILIZATION
- PROPOSED CONCRETE SIDEWALK

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GAITHERSBURG, MARYLAND

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Chief, Design Section — Date

APPROVED

Chief, Division of Transportation Engineering — Date

Designed by: ADH Drawn by: MED Checked by: JJR

PS-08
ROADWAY PLAN
DALE DRIVE SHARED USE PATH

0 30' 60'

SCALE: 1"=30'

DATE: NOVEMBER 2022

CIP No.: 502109

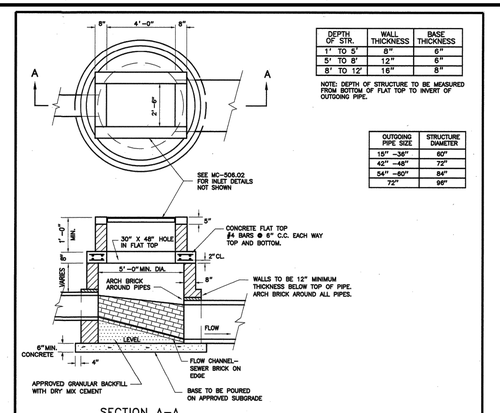
SHEET 30 of 181

STRUCTURE SCHEDULE

STRUCTURE	NORTHING	EASTING	STATION	OFFSET	BASELINE	T.S./RIM ELEV.	STD. NO.	TYPE	CONNECTED PIPES	INVERT IN	INVERT OUT	NOTES
I-1-1	488886.0	1301390.7	505+08.9	15.6 LT	DALEDRIVE_CL	327.70	MD 374.62	5' COG	1		322.70'	5' COG INLET
I-1-2	488886.4	1301403.7	505+21.1	15.5 LT	DALEDRIVE_CL	327.45	MD 374.63	5' COS	2	322.40'	322.40'	5' COS INLET
I-3-1	488427.1	1302461.5	516+87.7	12.6 RT	DALEDRIVE_CL	330.90	MD 374.62	10' COG	1		327.15'	10' COG INLET
I-3-3	488339.3	1302471.0	200+00.1	10.5 LT	GRACECHURCH	322.75	MD 374.71	TYPE S COMB.	1		318.70'	TYPE S COMBINATION, DOUBLE GRATE TANDEM
I-3-3A	488342.9	1302482.8	200+12.5	10.5 LT	GRACECHURCH	322.39	MD 374.71	TYPE S COMB.	2	318.40'	317.85'	TYPE S COMBINATION, DOUBLE GRATE TANDEM
I-3-4	488346.2	1302493.8	200+24.0	10.5 LT	GRACECHURCH	321.85	MD 374.71	TYPE S COMB.	3	317.61' 318.16'	317.50'	TYPE S COMBINATION, DOUBLE GRATE TANDEM
I-3-5	488325.2	1302497.2	200+21.0	10.6 RT	GRACECHURCH	322.06	MD 374.08	TRIPLE WR	1		317.31'	TYPE S COMBINATION, DOUBLE GRATE TANDEM
I-3-5A	488328.6	1302508.7	200+32.6	10.8 RT	GRACECHURCH	321.69	MD 374.71	TYPE S COMB.	2	317.01'	316.80'	TYPE S COMBINATION, DOUBLE GRATE TANDEM
I-3-6	488332.7	1302518.2	200+41.1	10.9 RT	GRACECHURCH	321.37	MD 374.71	TYPE S COMB.	3	316.45' 316.70'	316.04'	TYPE S COMBINATION, DOUBLE GRATE TANDEM
I-3-8	488380.1	1302585.0	518+15.2	31.5 RT	DALEDRIVE_CL	318.89	MC-506.01	J INLET	2	314.76'	314.60'	
I-3-11	488444.7	1302819.0	520+51.4	9.3 LT	DALEDRIVE_CL	309.33	MC-502.02	REV. TYPE B	4	304.44' 303.93' 303.96'	303.85'	
I-3-12	488419.1	1302795.8	520+21.7	8.4 RT	DALEDRIVE_CL	309.70	MC-502.02	REV. TYPE B	3	305.60' 306.07'	305.47'	
I-3-13	488410.1	1302760.0	519+85.4	8.4 RT	DALEDRIVE_CL	310.70	MC-502.02	REV. TYPE B	1		306.88'	
I-3-14	488427.9	1302824.1	520+51.2	8.3 RT	DALEDRIVE_CL	309.62	MC-502.02	REV. TYPE B	3	304.58' 304.89'	304.47'	
I-3-15	488442.2	1302870.4	520+99.7	8.3 RT	DALEDRIVE_CL	309.68	MC-502.02	REV. TYPE B	1		305.16'	
I-3-16	488451.9	1302842.3	520+75.7	9.3 LT	DALEDRIVE_CL	309.21	MC-502.02	REV. TYPE B	1		304.67'	
I-3-17	488435.7	1302789.2	520+20.0	9.3 LT	DALEDRIVE_CL	309.41	MC-502.02	REV. TYPE B	1		305.05'	
I-14-2	488647.1	1303840.9	530+88.6	50.0 LT	DALEDRIVE_CL	310.27	MD 374.62	10' COG	1		304.87'	10' COG INLET
JB-1-3	488892.7	1301407.7	505+24.9	21.9 LT	DALEDRIVE_CL	326.92	–	JUNCTION BOX	1	322.30'		CONVERT EX. STRUCTURE, DETAIL SHEET 33
JB-3-9	488347.0	1302594.6	518+27.5	63.2 RT	DALEDRIVE_CL	319.69	–	JUNCTION BOX	2	313.80'	313.80'	CONVERT EX. STRUCTURE, DETAIL SHEET 33
JB-3-10	488409.2	1302799.1	520+22.1	18.8 RT	DALEDRIVE_CL	310.10	–	JUNCTION BOX	2	306.00'	305.81'	CONVERT EX. STRUCTURE, DETAIL SHEET 33
JB-3-18	488458.5	1302814.5	520+51.1	23.8 LT	DALEDRIVE_CL	309.66	–	JUNCTION BOX	1	303.40'		CONVERT EX. STRUCTURE, DETAIL SHEET 33
JB-14-1	488629.9	1303838.4	530+91.8	32.9 LT	DALEDRIVE_CL	311.48	–	JUNCTION BOX	1		304.50'	CONVERT EX. STRUCTURE, DETAIL SHEET 33
MH-3-2	488412.5	1302509.1	517+37.3	15.1 RT	DALEDRIVE_CL	327.13	MC-515.01	B MANHOLE	2	322.86'	322.31'	48" SQUARE MANHOLE
MH-3-7	488372.1	1302563.9	517+96.9	42.6 RT	DALEDRIVE_CL	319.96	MC-515.01	B MANHOLE	2	315.17'	315.09'	48" SQUARE MANHOLE
MH-14-3	488647.6	1303849.7	530+96.2	53.4 LT	DALEDRIVE_CL	310.23	MD 384.03	60" MANHOLE	2	304.56' 303.31'		

PIPE SCHEDULE

FROM	TO	INV. UP	INV. DOWN	LENGTH	SLOPE	SIZE	TYPE
I-1-1	I-1-2	322.70	322.40	10'	2.92%	18"	REINFORCED CONCRETE PIPE
I-3-1	MH-3-2	327.15	322.86	46'	9.42%	15"	REINFORCED CONCRETE PIPE
I-3-3	I-3-3A	318.70	318.40	5'	6.05%	18"	REINFORCED CONCRETE PIPE
I-3-3A	I-3-4	317.85	317.61	4'	5.56%	18"	REINFORCED CONCRETE PIPE
I-3-4	I-3-6	317.50	316.70	24'	3.36%	24"	REINFORCED CONCRETE PIPE
I-3-5	I-3-5A	317.31	317.01	3'	9.61%	18"	REINFORCED CONCRETE PIPE
I-3-5A	I-3-6	316.80	316.45	3'	11.04%	18"	REINFORCED CONCRETE PIPE
I-3-6	MH-3-7	316.04	315.17	57'	1.52%	30"	REINFORCED CONCRETE PIPE
I-3-8	JB-3-9	314.60	313.80	31'	2.58%	30"	REINFORCED CONCRETE PIPE
I-3-11	JB-3-18	303.85	303.40	11'	4.06%	30"	REINFORCED CONCRETE PIPE
I-3-12	I-3-14	305.47	304.58	26'	3.45%	30"	REINFORCED CONCRETE PIPE
I-3-13	I-3-12	306.88	306.07	34'	2.35%	18"	REINFORCED CONCRETE PIPE
I-3-14	I-3-11	304.47	303.93	16'	3.40%	30"	REINFORCED CONCRETE PIPE
I-3-15	I-3-14	305.16	304.89	47'	0.58%	18"	REINFORCED CONCRETE PIPE
I-3-16	I-3-11	304.67	304.44	21'	1.09%	18"	REINFORCED CONCRETE PIPE
I-3-17	I-3-11	305.05	303.96	29'	3.80%	18"	REINFORCED CONCRETE PIPE
I-14-2	MH-14-3	304.87	304.56	5'	6.35%	15"	REINFORCED CONCRETE PIPE
JB-1-3	I-1-2	322.30	322.40	4'	2.66%	24"	REINFORCED CONCRETE PIPE
JB-3-9	JB-3-10	313.80	306.00	210'	3.72%	30"	REINFORCED CONCRETE PIPE
JB-3-10	I-3-12	305.81	305.60	7'	2.88%	30"	REINFORCED CONCRETE PIPE
MH-3-2	I-3-4	322.31	318.16	64'	6.46%	15"	REINFORCED CONCRETE PIPE
MH-3-7	I-3-8	315.09	314.76	19'	1.74%	30"	REINFORCED CONCRETE PIPE
MH-14-3	JB-14-1	303.31	304.50	17'	7.05%	24"	REINFORCED CONCRETE PIPE



SECTION A-A

DEPTH OF STR.	WALL THICKNESS	BASE THICKNESS
1' TO 5'	8"	6"
5' TO 8'	12"	8"
8' TO 12'	16"	8"

NOTE: DEPTH OF STRUCTURE TO BE MEASURED FROM BOTTOM OF FLAT TOP TO INVERT OF OUTGOING PIPE.

OUTGOING PIPE SIZE	STRUCTURE DIAMETER
15" –36"	60"
42" –48"	72"
54" –60"	84"
72"	90"

GENERAL NOTES

1. REFER TO MARYLAND STATE HIGHWAY ADMINISTRATION FOR MATERIALS AND METHODS OF CONSTRUCTION.
2. USE SOLID MASONRY (BRICK OR CONCRETE BLOCK) OR POURED CONCRETE FOR WALLS. USE OF M.C.D.O.T. APPROVED PRECAST CONCRETE STRUCTURES MAY BE USED IN PLACE OF BRICK MASONRY.
3. MORTAR SHALL CONFORM TO ASTM SPECIFICATION C270 TYPE M.
4. PROVIDE STEPS IN CHANNELS OF STRUCTURES. REFER TO MC-520.01 FOR DETAILS.
5. f'_c = 3,500 P.S.I. AT 28 DAYS.
6. TWO 4"ø WEEP HOLES TO BE PLACED OPPOSITE EACH OTHER AT CROWN OF CHANNEL. COVER OPENING WITH 1/2" HARDWARE CLOTH.
7. INSTALL FOUNDATION DRAINAGE MATERIAL 1' MINIMUM THICKNESS AROUND STRUCTURE FROM BOTTOM OF WEEP HOLES TO WITHIN 8" OF FINISHED GRADE.
8. PARGE OUTSIDE WALLS.

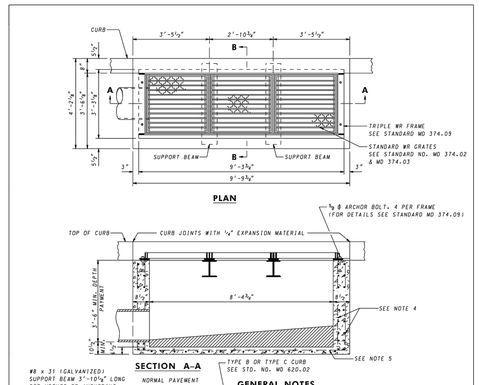
APPROVED JAN 5 96
DATE
DIRECTOR, DEPT. OF TRANS.
CHIEF, DIV. OF ENG. SERVICES

REVISED

MONTGOMERY COUNTY
DEPARTMENT OF TRANSPORTATION

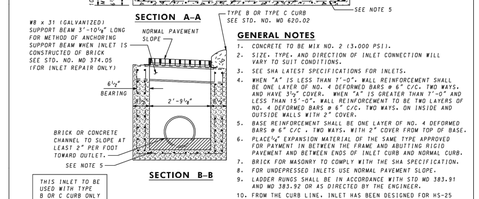
"J" INLET

STANDARD NO. MC-506.01



PLAN

SECTION A-A



SECTION B-B

GENERAL NOTES

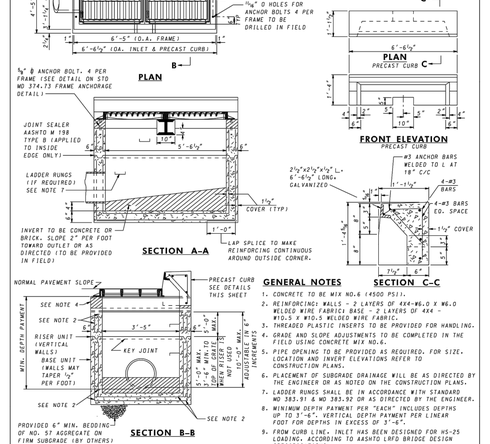
1. CONCRETE TO BE MIX NO. 2 (3,000 PSI).
2. SIZES, TYPE, AND DIRECTION OF INLET CONNECTION WILL VARY TO SUIT CONDITIONS.
3. SEE SHA LATEST SPECIFICATIONS FOR INLETS.
4. WHEN "A" IS LESS THAN 7'-0", WALL REINFORCEMENT SHALL BE ONE LAYER OF NO. 4 DEFORMED BARS @ 6" C/C, TWO WAYS, AND HAVE 2½" COVER. WHEN "A" IS GREATER THAN 7'-0" AND LESS THAN 15'-0", WALL REINFORCEMENT TO BE TWO LAYERS OF NO. 4 DEFORMED BARS @ 6" C/C, TWO WAYS, ON INSIDE AND OUTSIDE WALLS WITH 2" COVER.
5. BASE REINFORCEMENT SHALL BE ONE LAYER OF NO. 4 DEFORMED BARS @ 6" C/C , TWO WAYS, WITH 2" COVER FROM TOP OF BASE.
6. PLACE¾" EXPANSION MATERIAL OF THE SAME TYPE APPROVED FOR PAYMENT IN BETWEEN THE FRAME AND ABUTTING RIGID PAVEMENT AND BETWEEN ENDS OF INLET CURB AND NORMAL CURB.
7. BRICK FOR MASONRY TO COMPLY WITH THE SHA SPECIFICATION.
8. FOR UNDEPRESSED INLETS USE NORMAL PAVEMENT SLOPE.
9. LADDER RUNGS SHALL BE IN ACCORDANCE WITH STD NO 383.91 AND NO 383.92 OR AS DIRECTED BY THE ENGINEER.
10. FROM THE CURB LINE, INLET HAS BEEN DESIGNED FOR HS-25 LOADING ACCORDING TO AASHTO LRFD BRIDGE DESIGN SPECIFICATIONS AND TO A MAXIMUM DEPTH OF 15'-0".

SPECIFICATION	CATEGORY CODE ITEMS
305	

APPROVED
DIRECTOR – OFFICE OF HIGHWAY DEVELOPMENT

SHA REVISIONS	APPROVAL • SHA	APPROVAL • FEDERAL HIGHWAY ADMINISTRATION
APPROVAL	8-9-82	9-13-82
REVISED	10-1-03	3-24-88
REVISED	10-7-14	9-29-14
REVISED		

Maryland Department of Transportation
STATE HIGHWAY ADMINISTRATION
STANDARDS FOR HIGHWAYS AND INCIDENTAL STRUCTURES
TRIPLE WR INLET
STANDARD NO. MD 374.08



GENERAL NOTES

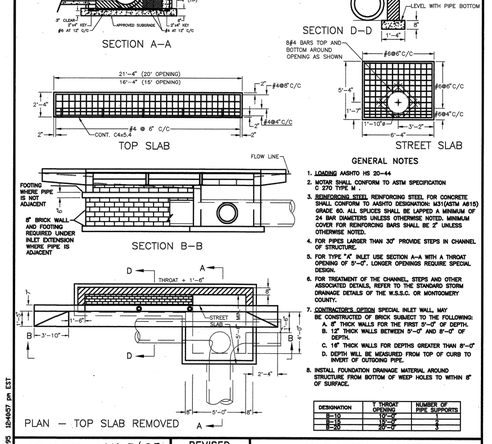
1. CONCRETE TO BE MIX NO.6 (4500 PSI).
2. REINFORCING: WALLS - 2 LAYERS OF 4X4-W6.0 X W6.0 WELDED WIRE FABRICS BASE - 2 LAYERS OF 4X4 - W10.5 X W10.5 WELDED WIRE FABRIC.
3. THREADED PLASTIC INSERTS TO BE PROVIDED FOR HANDLING.
4. GRADE AND SLOPE ADJUSTMENTS TO BE COMPLETED IN THE FIELD USING CONCRETE MIX NO.6.
5. PIPE OPENING TO BE PROVIDED AS REQUIRED. FOR SIZE, LOCATION AND INVERT ELEVATIONS REFER TO CONSTRUCTION PLANS.
6. PLACEMENT OF SUBGRADE DRAINAGE WILL BE AS DIRECTED BY THE ENGINEER OR AS NOTED ON THE CONSTRUCTION PLANS.
7. LADDER RUNGS SHALL BE IN ACCORDANCE WITH STANDARD NO 383.91 & WO 383.92 OR AS DIRECTED BY THE ENGINEER.
8. MINIMUM DEPTH PAYMENT PER "EACH" INCLUDES DEPTHS UP TO 3'-6". VERTICAL DEPTH PAYMENT PER LINEAR FOOT FOR DEPTHS IN EXCESS OF 3'-6".
9. FROM CURB LINE, INLET HAS BEEN DESIGNED FOR HS-25 LOADING ACCORDING TO AASHTO LRFD BRIDGE DESIGN SPECIFICATIONS.

SPECIFICATION	CATEGORY CODE ITEMS
305	

APPROVED
DIRECTOR – OFFICE OF HIGHWAY DEVELOPMENT

SHA REVISIONS	APPROVAL • SHA	APPROVAL • FEDERAL HIGHWAY ADMINISTRATION
APPROVAL	4-13-87	6-23-87
REVISED	8-3-10	7-26-10
REVISED	10-7-14	9-29-14
REVISED		

Maryland Department of Transportation
STATE HIGHWAY ADMINISTRATION
STANDARDS FOR HIGHWAYS AND INCIDENTAL STRUCTURES
PRECAST STANDARD
TYPE S COMBINATION INLET
DOUBLE GRATE TANDEM
STANDARD NO. MD 374.71



GENERAL NOTES

1. LOADING AASHTO HS 20-44
2. MOTAR SHALL CONFORM TO ASTM SPECIFICATION C 270 TYPE M .
3. REINFORCING STEEL REINFORCING STEEL FOR CONCRETE SHALL CONFORM TO AASHTO DESIGNATION: M31(ASTM A615) GRADE 60. ALL SPLICES SHALL BE LAPPED A MINIMUM OF 24 BAR DIAMETERS UNLESS OTHERWISE NOTED. MINIMUM COVER FOR REINFORCING BARS SHALL BE 2" UNLESS OTHERWISE NOTED.
4. FOR PIPES LARGER THAN 30" PROVIDE STEPS IN CHANNEL OF STRUCTURE.
5. FOR TYPE "A" INLET USE SECTION A-A WITH A THROAT OPENING OF 5'-0" . LONGER OPENINGS REQUIRE SPECIAL DESIGN.
6. FOR TREATMENT OF THE CHANNEL, STEPS AND OTHER ASSOCIATED DETAILS, REFER TO THE STANDARD STORM DRAINAGE DETAILS OF THE W.S.S.C. OR MONTGOMERY COUNTY.
7. CONSTRUCTION OPTION SPECIAL INLET WALL MAY BE CONSTRUCTED OF BRICK SUBJECT TO THE FOLLOWING:
   A. 8" THICK WALLS FOR THE FIRST 5'-0" OF DEPTH.
   B. 12" THICK WALLS BETWEEN 5'-0" AND 8'-0" OF DEPTH.
   C. 16" THICK WALLS FOR DEPTHS GREATER THAN 8'-0"
   D. DEPTH WILL BE MEASURED FROM TOP OF CURB TO INVERT OF OUTGOING PIPE.
8. INSTALL FOUNDATION DRAINAGE MATERIAL AROUND STRUCTURE FROM BOTTOM OF WEEP HOLES TO WITHIN 8" OF SURFACE.

DESIGNATION	T THROAT OPENING	NUMBER OF PIPE SUPPORTS
B-15	15'-0"	3
B-20	20'-0"	4

APPROVED JAN 5 96
DATE
DIRECTOR, DEPT. OF TRANS.
CHIEF, DIV. OF ENG. SERVICES

REVISED
1ST DRAFT ONLY
AT GUTTER EDGE
6/25/96

MONTGOMERY COUNTY
DEPARTMENT OF TRANSPORTATION

REVERSE "B" INLET

STANDARD NO. MC-502.02

DRAFT
NOT FOR CONSTRUCTION

RJM ENGINEERING

NO.	REVISION	DATE	BY

MONTGOMERY COUNTY
DEPARTMENT OF TRANSPORTATION
GAITHERSBURG, MARYLAND

RECOMMENDED FOR APPROVAL

Chief, Design Section — Date

APPROVED

Chief, Division of Transportation Engineering — Date

Designed by: KJS Drawn by: LZ Checked by: DZ

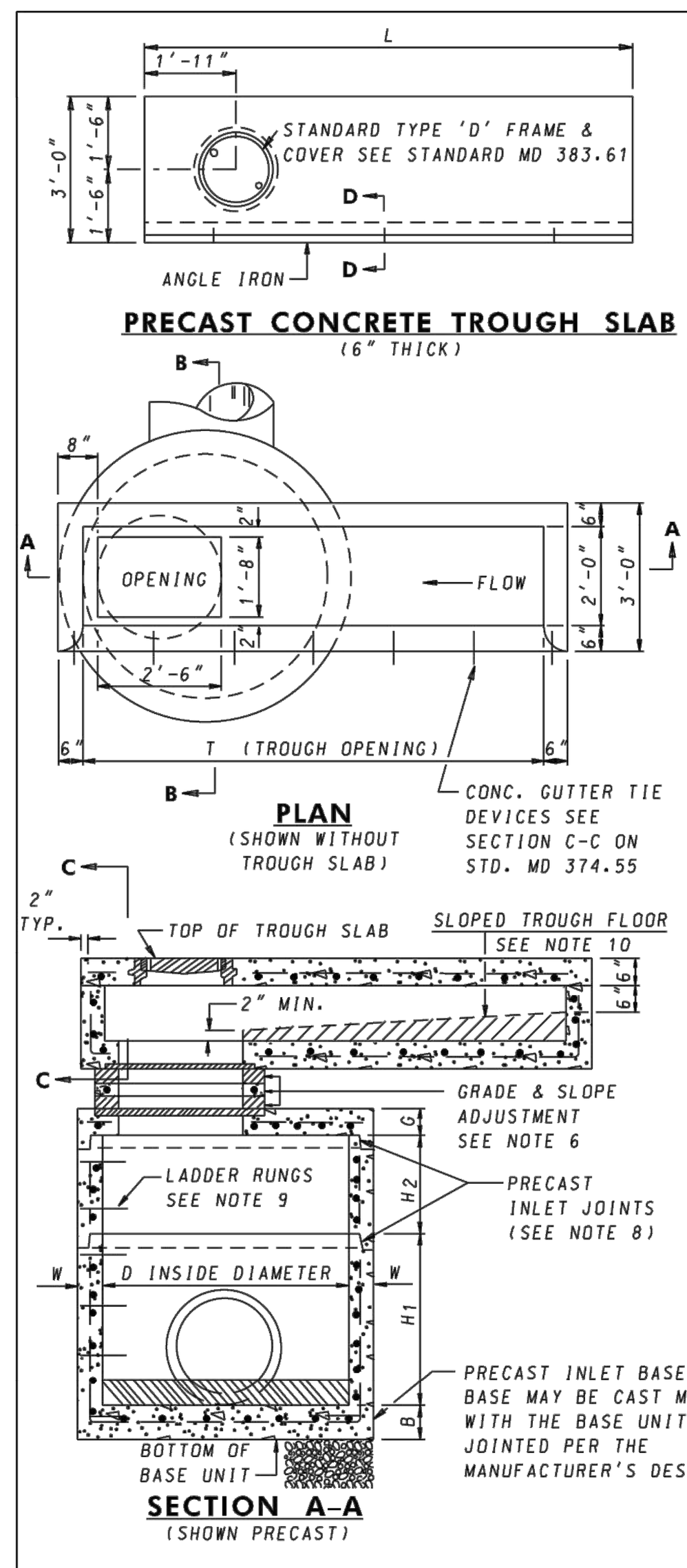
DD-01
DRAINAGE DESIGN

DALE DRIVE SHARED USE PATH

SCALE: NOT TO SCALE DATE: NOVEMBER 2022

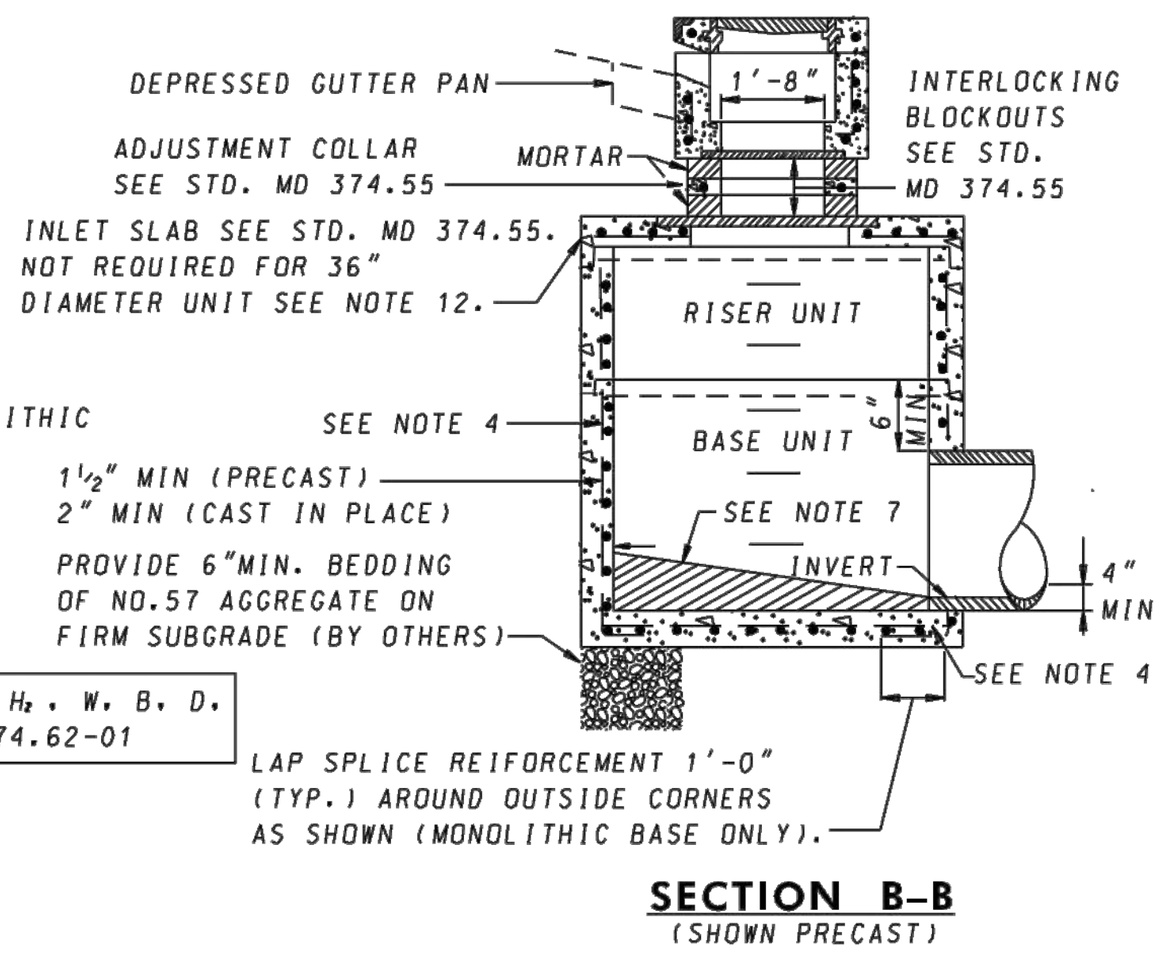
CIP No. : 502109 SHEET 31 of 181

FILE NAME: P:\MoCo\Dale Drive Bike-Ped Path\00_Working\pDT-P001_DaleDr.dwg LAYOUT NAME: DD-01 (Details) PLOTTED: Tuesday, November 22, 2022 – 2:28pm USER: kevin



NOTES

1. THIS STANDARD TO BE USED WITH TYPE A COMBINATION CURB AND GUTTER ONLY.
2. CURB OPENINGS SHALL NOT ENCROACH ON CROSSWALK AREAS.
3. CONCRETE SHALL BE MIX. NO.6(4500 PSI) FOR PRECAST UNITS AND CONCRETE MIX NO.3(3500 PSI) FOR CAST IN PLACE UNITS.
4. INLET MAY BE PRECAST OR CAST IN PLACE. REINFORCEMENT SHALL BE EITHER WELDED WIRE FABRIC (PRECAST) OR REINFORCING BARS (CAST IN PLACE)AND SHALL CONFORM TO THE AREAS GIVEN UNDER IN THE CHART ON STD MD 374.62-01. WALL REINFORCEMENT SHALL BE CENTERED AT THE MIDDLE OF THE WALL. BASE REINFORCEMENT SHALL HAVE 1½" COVER (PRECAST) AND 2" COVER (CAST IN PLACE) FROM THE TOP OF THE BASE.
5. ANGLE IRON AND SHEAR STUD CONNECTORS SHALL BE GALVANIZED AFTER AFTER WELDING IN ACCORDANCE WITH ASTM A 123. SEE STDS. MD 374.55 & 374.64.
6. GRADE AND SLOPE ADJUSTMENTS SHALL BE COMPLETED IN THE FIELD USING PRECAST ADJUSTMENT COLLAR AND MORTAR.
7. A CONCRETE OR BRICK CHANNEL WHICH SLOPES AT LEAST 2 IN./FT. TOWARD OUTLET SHALL BE PROVIDED IN THE FIELD.
8. PRECAST INLET JOINTS-THE MANUFACTURER SHALL FORM MALE AND FEMALE ENDS OF JOINTS USING THEIR OWN DESIGN. THE JOINTS SHALL BE SEALED BY THE CONTRACTOR AND MADE WATERTIGHT USING THE MANUFACTURERS RECOMMENDED ASTM OR AASHTO APPROVED SEALANT.
9. LADDER RUNGS SHALL BE PLACED IN VERTICAL ALIGNMENT AT 1'-3" C/C. RUNGS SHALL BE IN ACCORDANCE WITH STANDARDS MD 383.91 OR MD 383.92. RUNGS ARE INCIDENTAL TO THE COST OF THE INLET.
10. SLOPED TROUGH FLOOR TO BE CONSTRUCTED IN THE FIELD USING BRICK OR CONCRETE AND USED ONLY WHEN ROAD GRADE IS 1.5% OR LESS.WHEN SLOPED TROUGH FLOOR IS USED, ROUGHEN PRECAST TROUGH FLOOR.
11. MINIMUM DEPTH PAYMENT PER EACH SHALL BE 6'-2" MEASURED FROM THE PIPE INVERT TO THE TOP OF THE TROUGH SLAB. VERTICAL DEPTH PAYMENT PER LINEAR FOOT SHALL INCLUDE ALL DEPTHS IN EXCESS OF 6'-2" INCLUDING ALL APPURTENANCES.
12. INLET SLAB NOT REQUIRED FOR 36" DIAMETER INLET. TROUGH SITS DIRECTLY ON TOP OF THE CIRCULAR UNIT. MORTAR AREA BETWEEN THE OUTSIDE WALLS OF THE TROUGH AND THE UNIT WALL.
13. SEE STD. MD 374.64 FOR ALTERNATE PRECAST COG TROUGHS AND STD. MD 374.65 FOR DEPRESSED GUTTER PAN DETAILS.
14. BASE UNIT WALLS MAY TAPER PER MANUFACTURER'S DESIGN.
15. FROM CURB LINE, INLET HAS BEEN DESIGNED FOR HS-25 LOADING, ACCORDING TO AASHTO LRFD BRIDGE DESIGN SPECIFICATIONS.



FOR SECTIONS C-C AND D-D SEE STD MD 374.55

INLET TYPE	T	L
COG-5	5'-0"	6'-0"
COG-10	10'-0"	11'-0"
COG-15	15'-0"	16'-0"
COG-20	20'-0"	21'-0"

FOR DIMENSIONS H₁, H₂, W, B, D, AND G SEE STD MD 374.62-01

SPECIFICATION 305	CATEGORY CODE ITEMS
APPROVED	DIRECTOR – OFFICE OF HIGHWAY DEVELOPMENT

APPROVAL • SHA REVISIONS		APPROVAL • FEDERAL HIGHWAY ADMINISTRATION	
APPROVAL	2-22-91	APPROVAL	1-2-91
REVISED	8-3-10	REVISED	7-26-10
REVISED	10-7-14	REVISED	9-29-14
REVISED	–	REVISED	

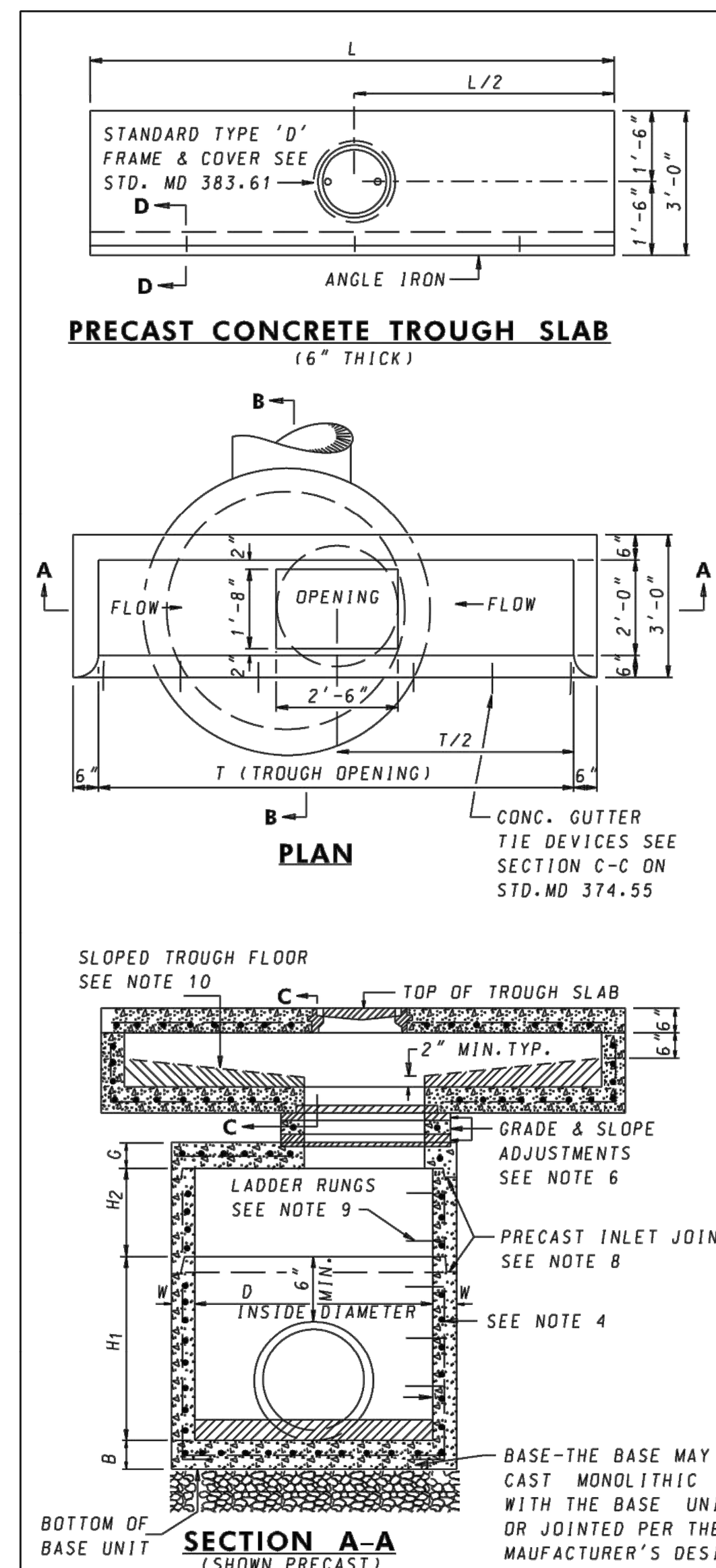
Maryland Department of Transportation
STATE HIGHWAY ADMINISTRATION
STANDARDS FOR HIGHWAYS AND INCIDENTAL STRUCTURES
PRECAST OR CAST IN PLACE CIRCULAR COG INLETS 5', 10', 15', & 20'
STANDARD NO. MD 374.62

CIRCULAR BASE AND RISER UNIT DIMENSIONS										INLET SLAB	
PIPE SIZE MIN. TO MAX.	H_1 BASE	H_2 RISER	W	WALL AREA STEEL IN^2/FT	MAX. SPACING IN.	B	BASE AREA STEEL IN^2/FT	MAX. SPACING IN.	D	G	Min. Distance, ft. Top of Curb - Pipe Invert
12"	2' TO 4'	1' TO 4'	4"	.09	12"	6.5"	.15	6"	36"	NOT REQ.	3.84
15" TO 24"	3' TO 5'	1' TO 5'	5"	.12	12"	6.5"	.18	6"	48"	8"	4.11-4.92
27" TO 33"	3' TO 6'	1' TO 6'	6"	.15	12"	6.5"	.27	6"	60"	8"	5.19-5.73
36"	5' TO 6'	1' TO 6'	6"	.15	12"	6.5"	.27	6"	60"	8"	6.00
42"	5' TO 7'	1' TO 7'	7"	.18	11"	7.5"	.30	6"	72"	8"	6.55
48"	6' TO 7'	1' TO 7'	7"	.18	11"	7.5"	.30	6"	72"	8"	7.09
54"	6' TO 8'	1' TO 8'	8"	.21	8"	9.5"	.36	6"	84"	8"	7.63
60"	7' TO 8'	1' TO 8'	8"	.21	8"	9.5"	.36	6"	84"	8"	8.17
66" TO 72"	8' TO 9'	1' TO 8'	9"	.24	7"	9.5"	.40	6"	96"	8"	8.71-9.25
78" TO 84"	9' TO 10'	1' TO 8'	10"	.27	4"	12.5"	.40	6"	120"	8"	9.80-10.34

SPECIFICATION 305	CATEGORY CODE ITEMS
APPROVED	DIRECTOR – OFFICE OF HIGHWAY DEVELOPMENT

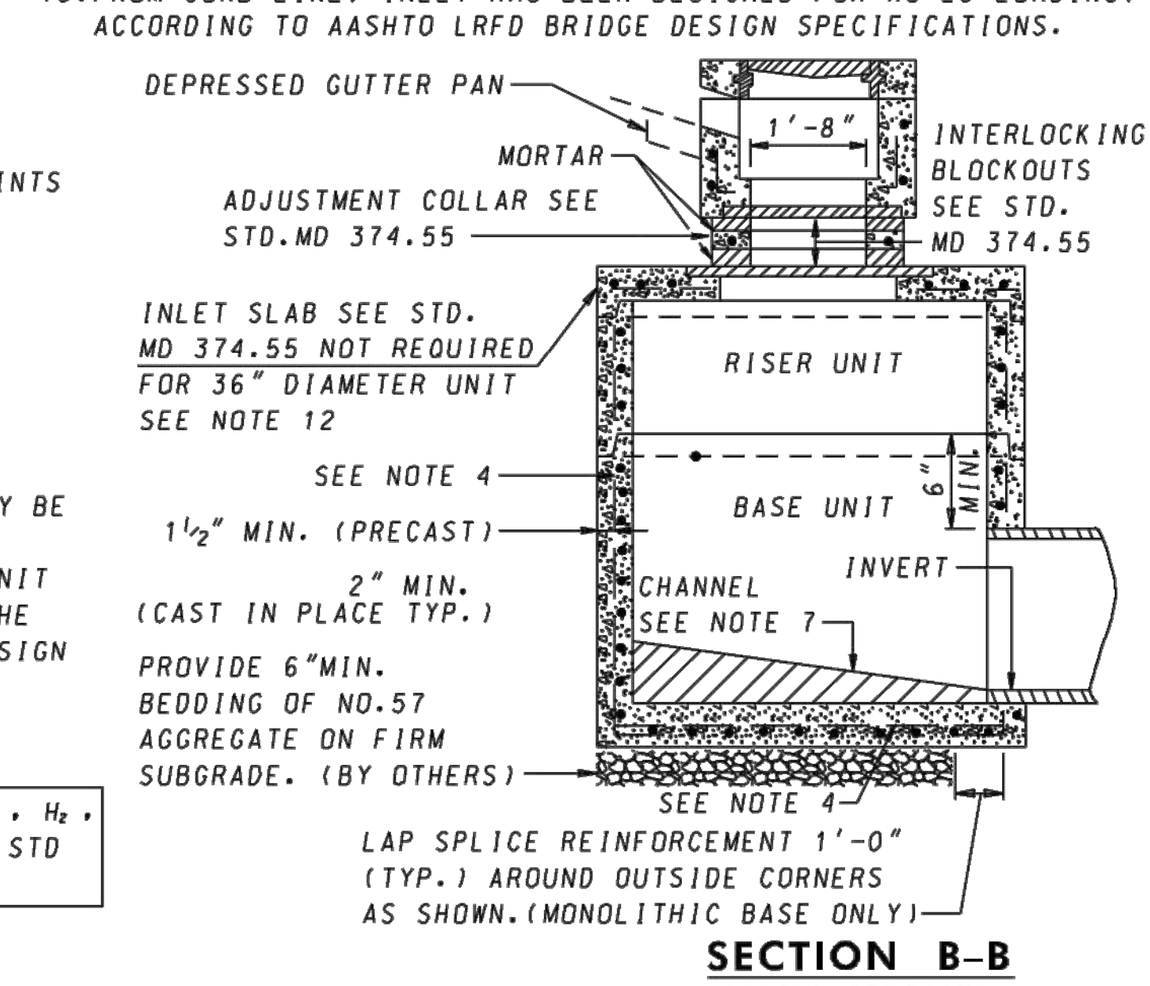
APPROVAL • SHA REVISIONS		APPROVAL • FEDERAL HIGHWAY ADMINISTRATION	
APPROVAL	10-7-14	APPROVAL	9-29-14
REVISED		REVISED	
REVISED		REVISED	
REVISED		REVISED	

Maryland Department of Transportation
STATE HIGHWAY ADMINISTRATION
STANDARDS FOR HIGHWAYS AND INCIDENTAL STRUCTURES
PRECAST OR CAST IN PLACE CIRCULAR COG/COS INLETS 5', 10', 15', & 20'
STANDARD NO. MD 374.62-01



NOTES

1. THIS STANDARD TO BE USED WITH TYPE A COMBINATION CURB AND GUTTER ONLY.
2. CURB OPENING SHALL NOT ENCROACH ON CROSSWALK AREAS.
3. CONCRETE TO BE MIX NO.6 (4500 PSI) FOR PRECAST UNITS AND CONCRETE MIX NO.3 (3500 PSI) FOR STRUCTURES CAST IN PLACE.
4. INLET MAY BE PRECAST OR CAST IN PLACE. REINFORCEMENT SHALL BE EITHER WELDED WIRE FABRIC (PRECAST) OR REINFORCING BARS (CAST IN PLACE) AND SHALL CONFORM TO THE AREAS AND SPACING GIVEN IN THE TABLE ON STD MD 374.62-01. WALL REINFORCEMENT SHALL BE CENTERED AT THE MIDDLE OF THE WALL. BASE REINFORCEMENT SHALL HAVE 1½" COVER (PRECAST) AND 2" COVER (CAST IN PLACE) FROM THE TOP OF THE BASE.
5. ANGLE IRON AND SHEAR STUD CONNECTORS SHALL BE GALVANIZED AFTER WELDING IN ACCORDANCE WITH ASTM A 123. SEE STDS. MD 374.55 & 374.64.
6. GRADE AND SLOPE ADJUSTMENTS SHALL BE COMPLETED IN THE FIELD USING PRECAST ADJUSTMENT COLLAR AND MORTAR.
7. A CONCRETE OR BRICK CHANNEL WHICH SLOPES AT LEAST 2 IN./FT. TOWARD OUTLET SHALL BE PROVIDED IN THE FIELD.
8. PRECAST INLET JOINTS- THE MANUFACTURER SHALL FORM MALE AND FEMALE ENDS OF JOINTS USING THEIR OWN DESIGN. THE JOINTS SHALL BE SEALED BY THE CONTRACTOR AND MADE WATERTIGHT USING THE MANUFACTURERS RECOMMENDED ASTM OR AASHTO APPROVED SEALANT.
9. LADDER RUNGS SHALL BE PLACED IN VERTICAL ALIGNMENT AT 1'-3" C/C RUNG TYPE SHALL BE IN ACCORDANCE WITH STDS. MD 383.91 OR MD 383.92. RUNGS ARE INCIDENTAL TO THE COST OF THE INLET.
10. SLOPED TROUGH FLOOR TO BE CONSTRUCTED IN THE FIELD USING BRICK OR CONCRETE AND USED ONLY WHEN ROAD GRADE IS 1.5% OR LESS. WHEN SLOPED TROUGH FLOOR IS USED, ROUGHEN PRECAST TROUGH FLOOR.
11. MINIMUM DEPTH PAYMENT PER EACH SHALL BE 6'-2" MEASURED FROM THE PIPE INVERT TO THE TOP OF THE TROUGH SLAB. VERTICAL DEPTH PAYMENT PER LINEAR FOOT SHALL INCLUDE ALL DEPTHS IN EXCESS OF 6'-2" INCLUDING ALL APPURTENANCES.
12. INLET SLAB NOT REQUIRED FOR 36" DIAMETER INLET. TROUGH SITS DIRECTLY ON THE TOP OF THE CIRCULAR UNIT. MORTAR AREA BETWEEN THE OUTSIDE WALLS OF THE TROUGH AND THE UNIT WALL.
13. SEE STD. MD 374.64 FOR ALTERNATE PRECAST COS TROUGHS AND STD. MD 374.65 FOR DEPRESSED GUTTER PAN DETAILS.
14. BASE UNIT WALLS TAPER PER MANUFACTURER'S DESIGN.
15. FROM CURB LINE, INLET HAS BEEN DESIGNED FOR HS-25 LOADING, ACCORDING TO AASHTO LRFD BRIDGE DESIGN SPECIFICATIONS.



FOR SECTION C-C AND D-D SEE STD MD 374.55

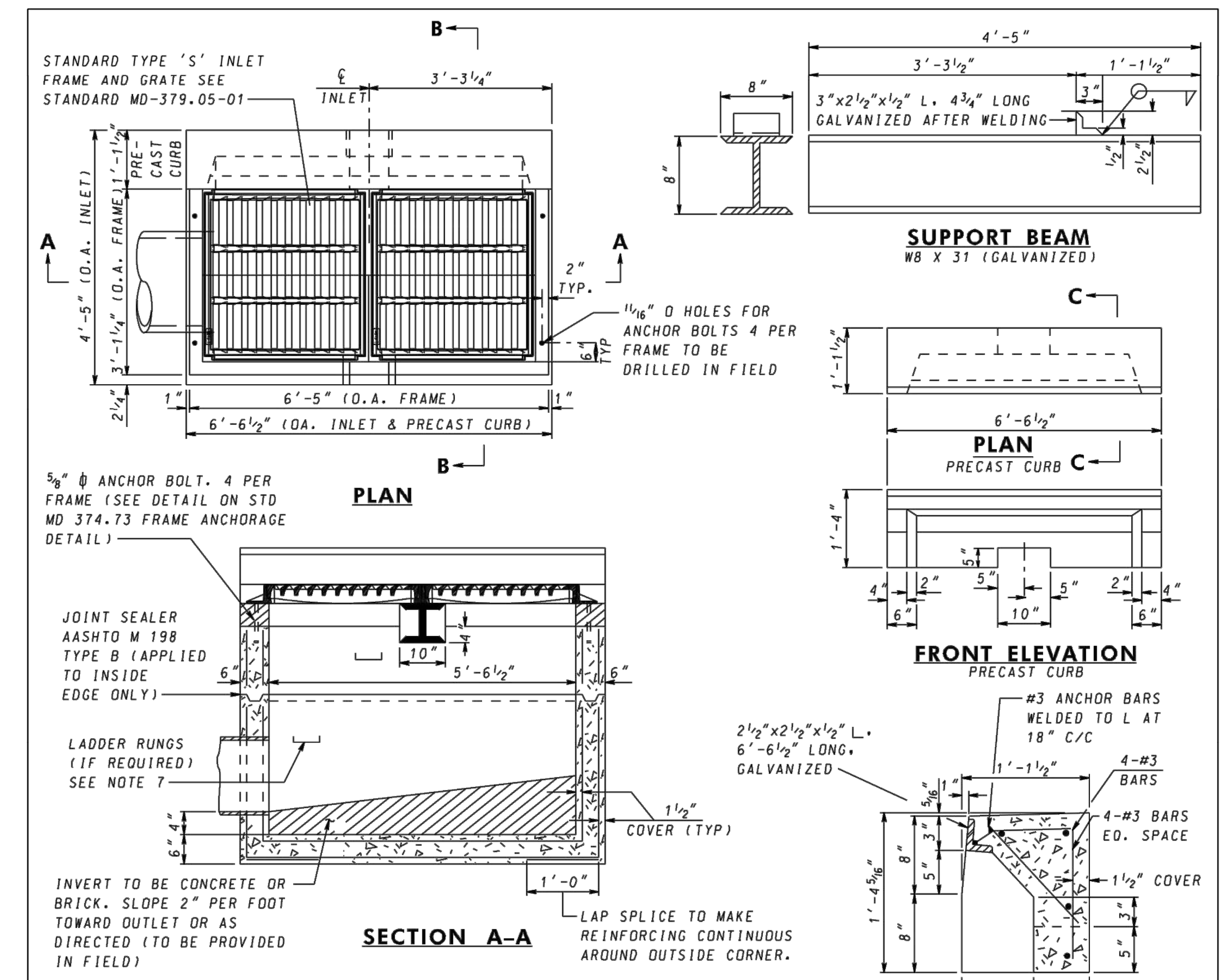
INLET TYPE	T	L
COS-5	5'-0"	6'-0"
COS-10	10'-0"	11'-0"
COS-15	15'-0"	16'-0"
COS-20	20'-0"	21'-0"

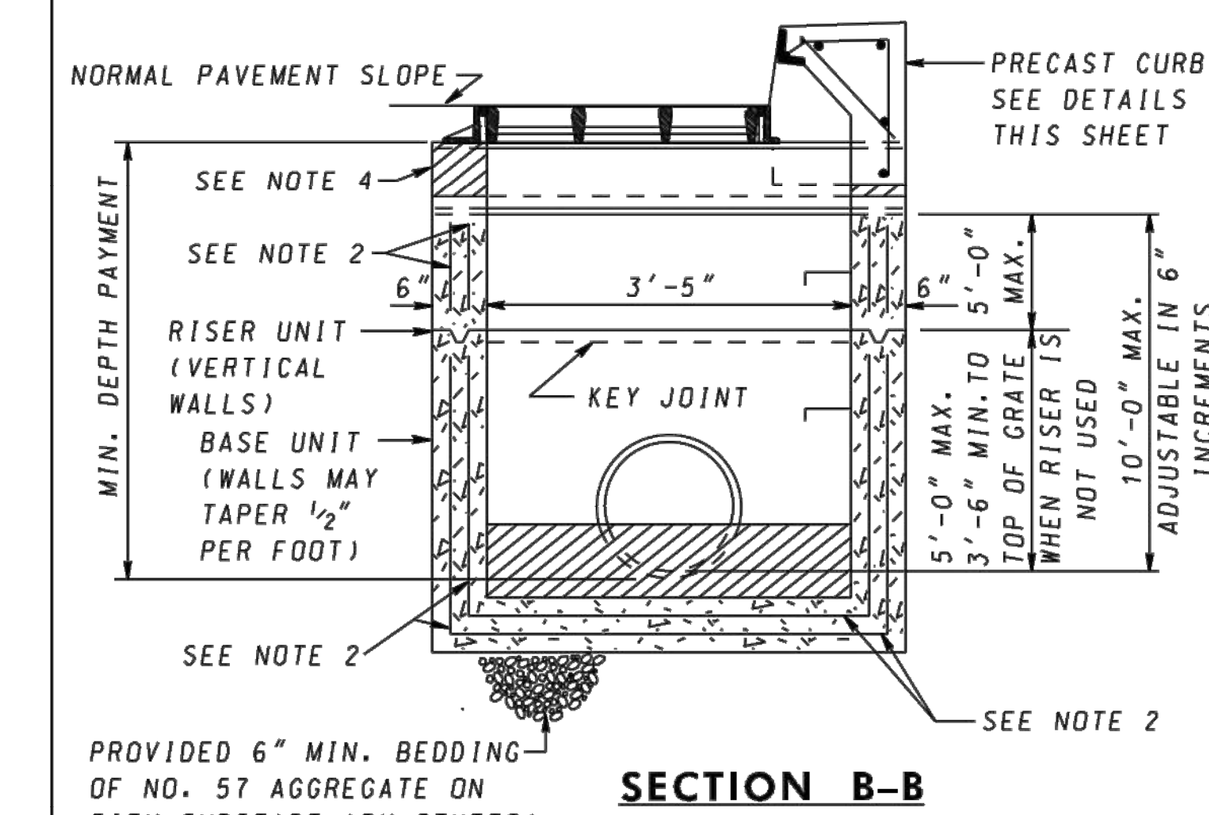
FOR DIMENSION H₁, H₂, W, B, AND G SEE STD MD 374.62-01

SPECIFICATION 305	CATEGORY CODE ITEMS
APPROVED	DIRECTOR – OFFICE OF HIGHWAY DEVELOPMENT

APPROVAL • SHA REVISIONS		APPROVAL • FEDERAL HIGHWAY ADMINISTRATION	
APPROVAL	2-22-91	APPROVAL	1-2-91
REVISED	8-3-10	REVISED	7-26-10
REVISED	10-7-14	REVISED	9-29-14
REVISED		REVISED	

Maryland Department of Transportation
STATE HIGHWAY ADMINISTRATION
STANDARDS FOR HIGHWAYS AND INCIDENTAL STRUCTURES
PRECAST OR CAST IN PLACE CIRCULAR COS INLETS 5', 10', 15, & 20'
STANDARD NO. MD 374.63





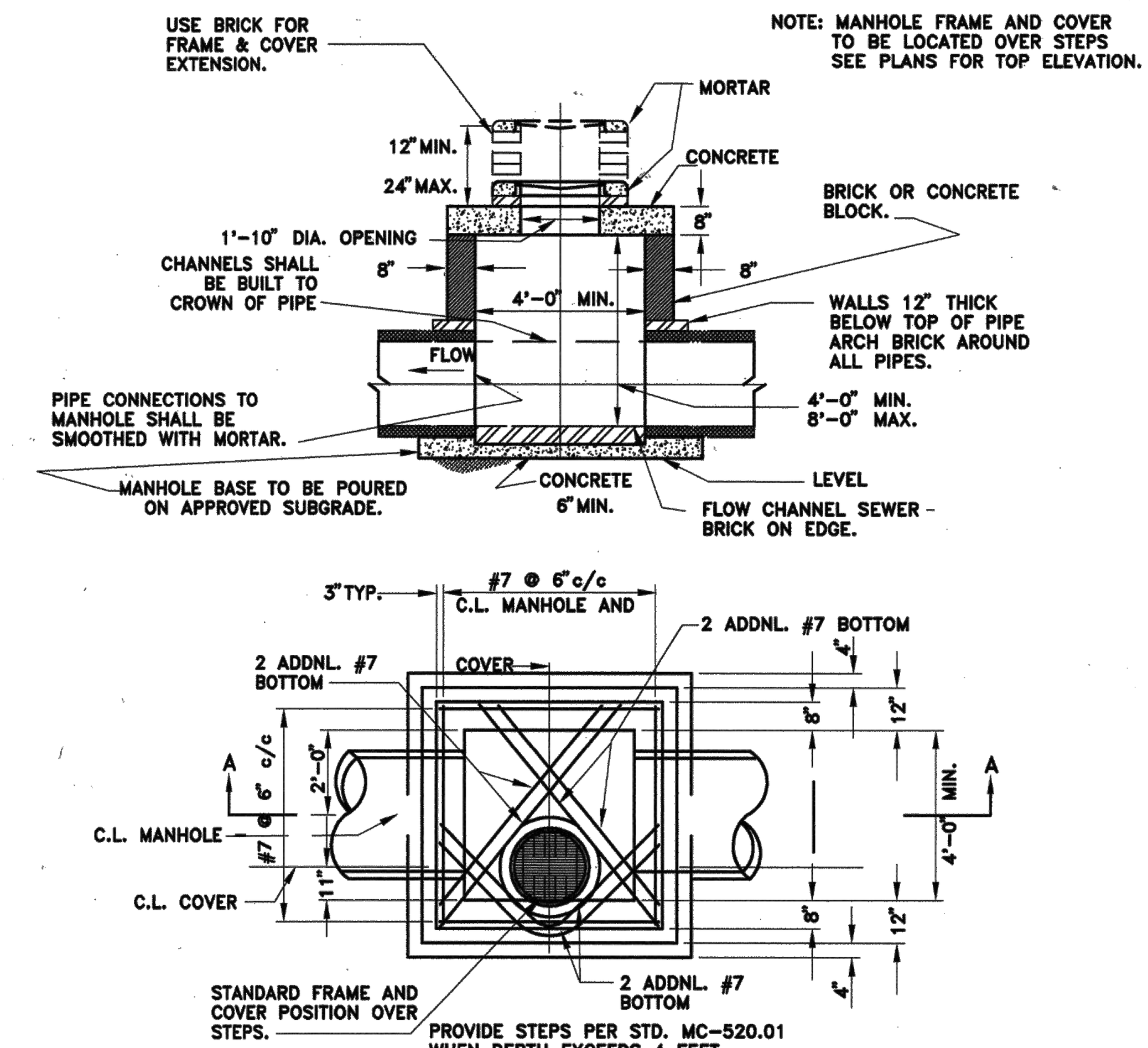
GENERAL NOTES

1. CONCRETE TO BE MIX NO.6 (4500 PSI).
2. REINFORCING: WALLS - 2 LAYERS OF 4X4-W6.0 X W6.0 WELDED WIRE FABRIC; BASE - 2 LAYERS OF 4X4 - W10.5 X W10.5 WELDED WIRE FABRIC.
3. THREADED PLASTIC INSERTS TO BE PROVIDED FOR HANDLING.
4. GRADE AND SLOPE ADJUSTMENTS TO BE COMPLETED IN THE FIELD USING CONCRETE MIX NO.6.
5. PIPE OPENING TO BE PROVIDED AS REQUIRED. FOR SIZE, LOCATION AND INVERT ELEVATIONS REFER TO CONSTRUCTION PLANS.
6. PLACEMENT OF SUBGRADE DRAINAGE WILL BE AS DIRECTED BY THE ENGINEER OR AS NOTED ON THE CONSTRUCTION PLANS.
7. LADDER RUNGS SHALL BE IN ACCORDANCE WITH STANDARD MD 383.91 & MD 383.92 OR AS DIRECTED BY THE ENGINEER.
8. MINIMUM DEPTH PAYMENT PER "EACH" INCLUDES DEPTHS UP TO 3'-6". VERTICAL DEPTH PAYMENT PER LINEAR FOOT FOR DEPTHS IN EXCESS OF 3'-6".
9. FROM CURB LINE, INLET HAS BEEN DESIGNED FOR HS-25 LOADING, ACCORDING TO AASHTO LRFD BRIDGE DESIGN SPECIFICATIONS.

SPECIFICATION 305	CATEGORY CODE ITEMS
APPROVED	DIRECTOR – OFFICE OF HIGHWAY DEVELOPMENT

APPROVAL • SHA REVISIONS		APPROVAL • FEDERAL HIGHWAY ADMINISTRATION	
APPROVAL	4-15-87	APPROVAL	6-23-87
REVISED	8-3-10	REVISED	7-26-10
REVISED	10-7-14	REVISED	9-29-14
REVISED	–	REVISED	

Maryland Department of Transportation
STATE HIGHWAY ADMINISTRATION
STANDARDS FOR HIGHWAYS AND INCIDENTAL STRUCTURES
PRECAST STANDARD TYPE S COMBINATION INLET DOUBLE GRATE TANDEM
STANDARD NO. MD 374.71



DEPTH	WALL THICKNESS
0' – 6'	8"
6' – 8'	12"

GENERAL NOTES

1. REFER TO MARYLAND STATE HIGHWAY ADMINISTRATION FOR MATERIALS AND METHODS OF CONSTRUCTION.
2. USE SOLID MASONRY (BRICK OR CONCRETE BLOCK) OR POURED CONCRETE FOR WALLS.
3. PARGE OUTSIDE WALLS.
4. MORTAR SHALL CONFORM TO ASTM SPECIFICATION C270 TYPE M.
5. f'c =3,500 P.S.I. at 28 DAYS.
6. FOR PIPES LARGER THAN 30" PROVIDE STEPS IN CHANNELS OF STRUCTURES. SEE STANDARD DETAIL. STANDARD MC-520.02

P:\DOTSTD\MC51001 7-12-94 8:41:15 am EST

APPROVED JAN 5/96 DATE

DIRECTOR, DEPT. OF TRANS.

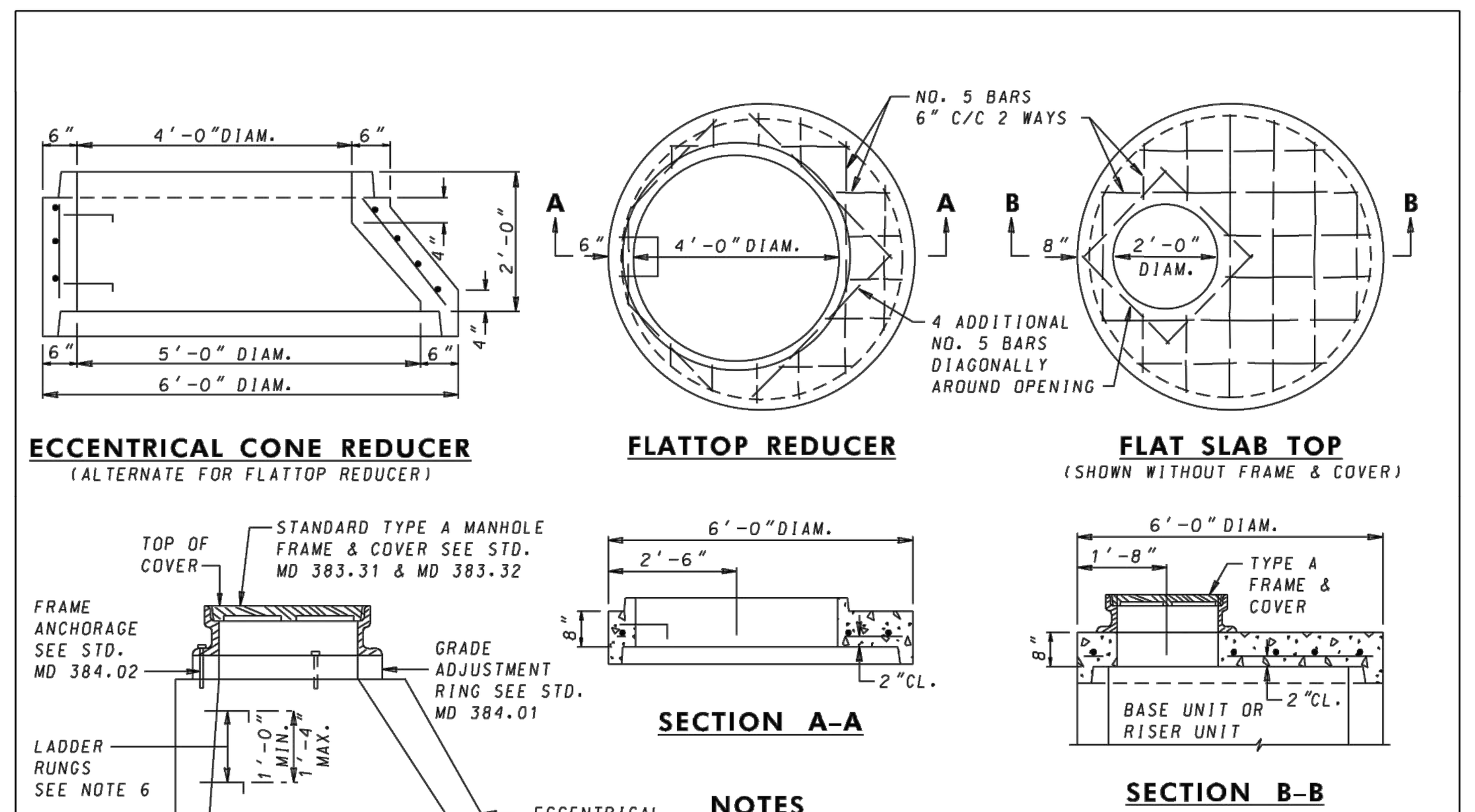
CHIEF, DIV. OF ENG. SERVICES

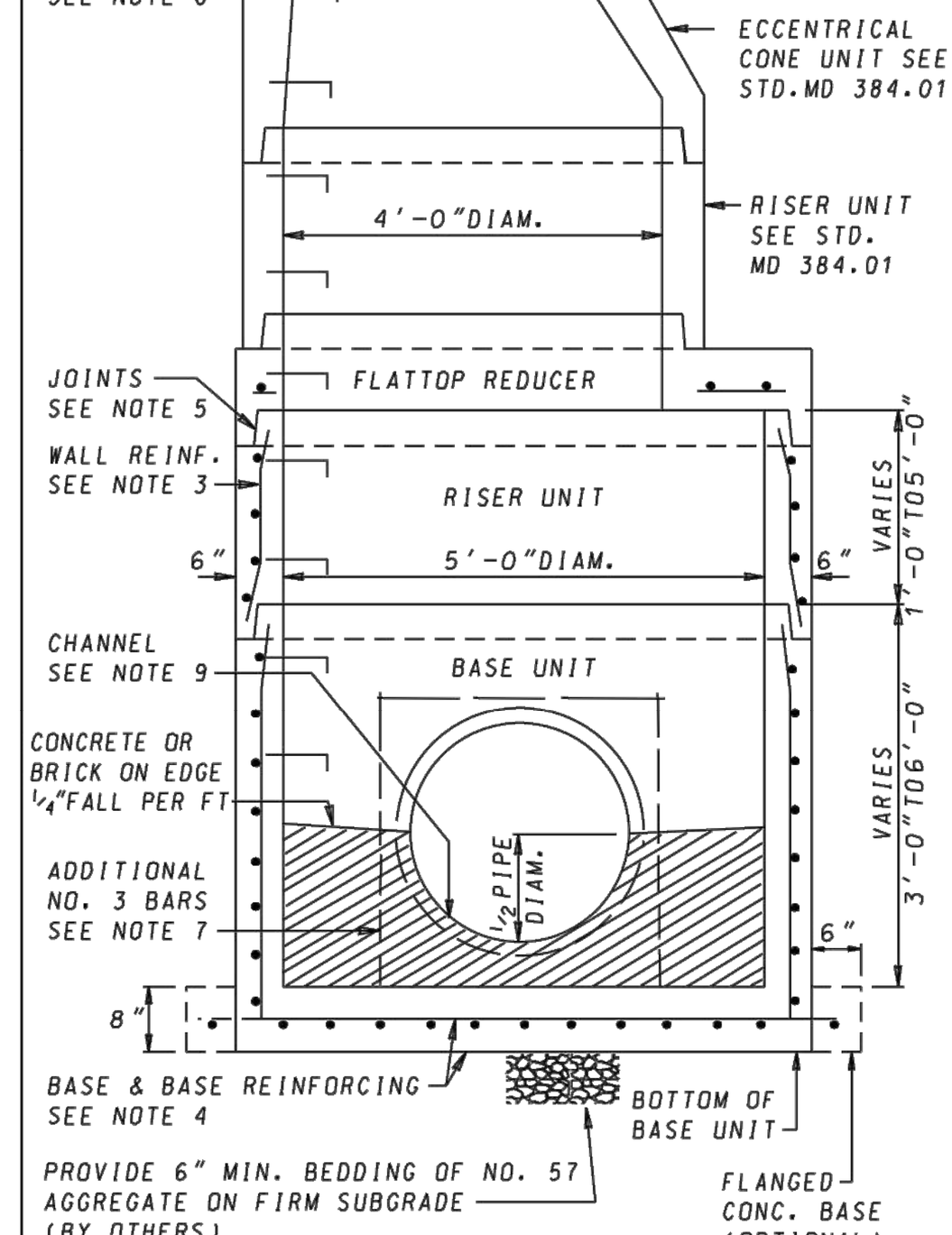
REVISED

MONTGOMERY COUNTY DEPARTMENT OF TRANSPORTATION

"B" MANHOLE

STANDARD NO. MC-515.01





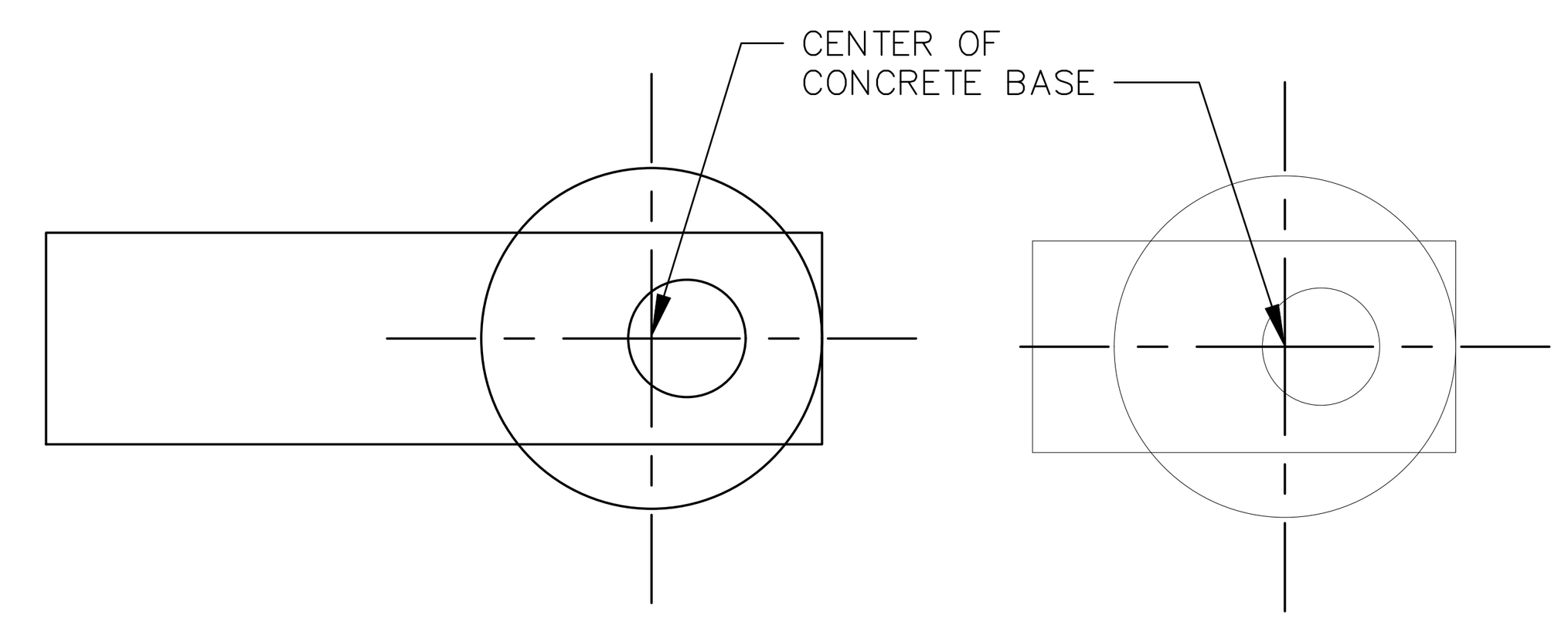
NOTES

1. MANHOLES SHALL BE CONSTRUCTED IN ACCORDANCE WITH AASHTO M 199.
2. CONCRETE SHALL BE MIX NO.6 (4500PSI).
3. WALL REINFORCEMENT FOR BASE UNITS, RISER UNITS AND ECCENTRICAL CONE UNITS SHALL BE REINFORCEMENT BARS OR WELDED WIRE FABRIC WITH A MINIMUM AREA OF 0.15 IN^2/FT AND MAXIMUM SPACING OF 9" FOR THE 60" DIAMETER MANHOLES. WELDED WIRE FABRIC SHALL CONFORM TO ASTM A 185 AND A 52. REINFORCEMENT SHALL MEET ASTM A 615, GRADE 60.
4. BASE REINFORCEMENT SHALL BE REINFORCEMENT BARS OR WELDED WIRE FABRIC WITH A MINIMUM AREA OF 0.27 IN^2/FT AND A MAXIMUM SPACING OF 8" WITH 2" COVER FROM THE TOP OF BASE. THE BASE SHALL BE CAST MONOLITHIC WITH THE UNIT OR JOINTED PER THE MANUFACTURER'S DESIGN.
5. THE MANUFACTURER SHALL FORM MALE AND FEMALE ENDS OF JOINTS USING THEIR OWN DESIGN. THE JOINTS SHALL BE SEALED BY THE CONTRACTOR AND MADE WATERTIGHT USING (WHERE APPLICABLE) MORTAR, RUBBER O-RING GASKETS MEETING ASTM C 361 AND C 443 OR FLEXIBLE PLASTIC GASKETS MEETING AASHTO M 198 TYPE B.
6. LADDER RUNGS SHALL BE INSTALLED IN VERTICAL ALIGNMENT AT 1'-4" MAXIMUM C/C. RUNG TYPES SHALL BE IN ACCORDANCE WITH STANDARDS MD 383.91 OR 383.92. LADDER RUNGS SHALL BE INCIDENTAL TO THE COST OF THE MANHOLE.
7. WHEN THE DISTANCE BETWEEN MUTIPLE OPENINGS IN THE BASE UNIT OR ANY RISER UNIT IS LESS THAN 6" ADDITIONAL NO.3 BARS ARE REQUIRED AROUND OPENINGS.
8. LIFT HOLES OR LIFT EYES SHALL BE PROVIDED IN EACH SECTION FOR HANDLING.
9. MIX NO.2 CONCRETE OR BRICK CHANNEL SHALL BE PROVIDED IN THE FIELD AND SHALL SLOPE 2" PER FOOT TOWARD OUTLET OR AS DIRECTED BY THE ENGINEER.
10. THE DRIP STONE LANDING SHALL BE USED ONLY WHEN THERE ARE PIPES CONNECTED TO THE RISER UNITS. SEE STD. MD 384.13 FOR DETAILS.
11. MINIMUM DEPTH PAYMENT PER EACH SHALL BE 9'-0" MEASURED FROM THE BOTTOM OF THE BASE UNIT TO THE TOP OF THE MANHOLE COVER. VERTICAL DEPTH PAYMENT PER LINEAR FOOT SHALL INCLUDE ALL DEPTHS IN EXCESS OF 9'-0". THE COST OF THE DRIP STONE LANDING, NO.57 AGGREGATE, GROUT, SEALANT, AND ALL NECESSARY APPURTENANCES SHALL BE INCIDENTAL TO THE PRICE BID.
12. MANHOLE HAS BEEN DESIGNED FOR HS-25 LOADING, ACCORDING TO AASHTO LRFD BRIDGE DESIGN SPECIFICATIONS.

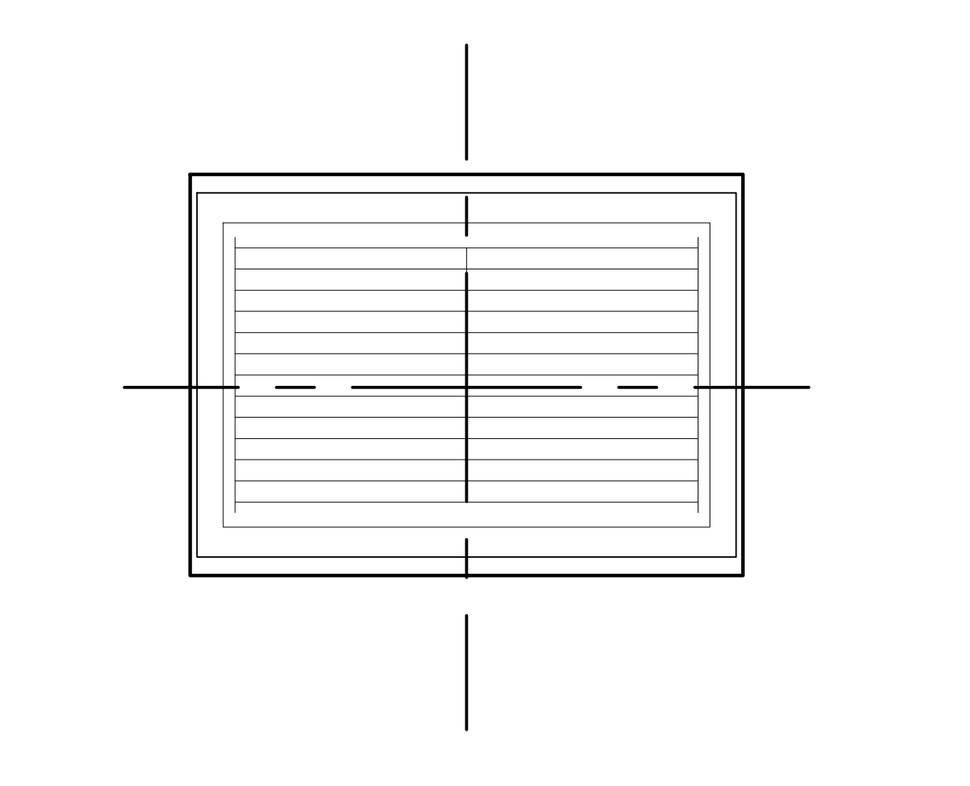
SPECIFICATION 305	CATEGORY CODE ITEMS
APPROVED	DIRECTOR – OFFICE OF HIGHWAY DEVELOPMENT

APPROVAL • SHA REVISIONS		APPROVAL • FEDERAL HIGHWAY ADMINISTRATION	
APPROVAL	2-22-91	APPROVAL	1-2-91
REVISED	10-7-14	REVISED	9-29-14
REVISED	–	REVISED	
REVISED		REVISED	

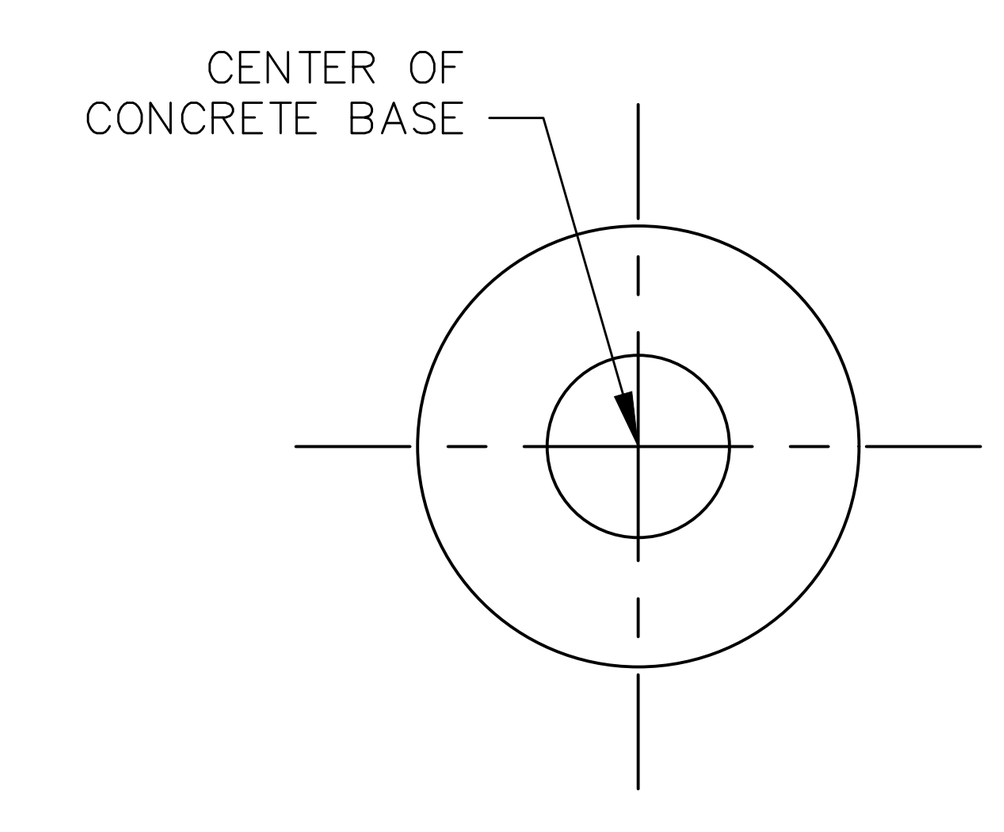
Maryland Department of Transportation
STATE HIGHWAY ADMINISTRATION
STANDARDS FOR HIGHWAYS AND INCIDENTAL STRUCTURES
60" DIAMETER PRECAST MANHOLE FOR 27" TO 36" PIPES
STANDARD NO. MD 384.03



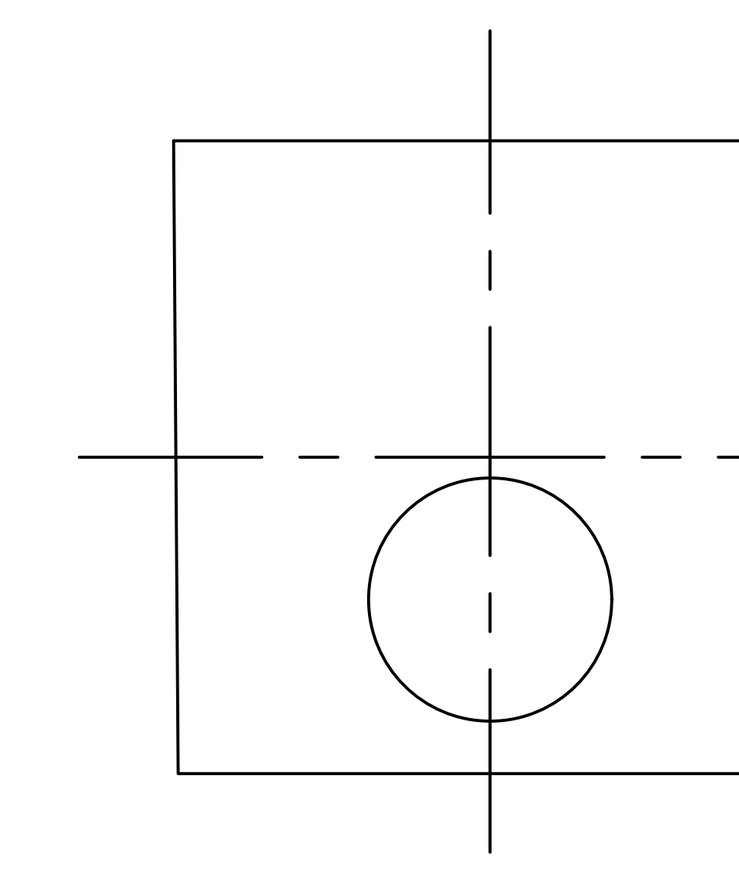
STATION AND OFFSET LOCATION FOR COG INLETS



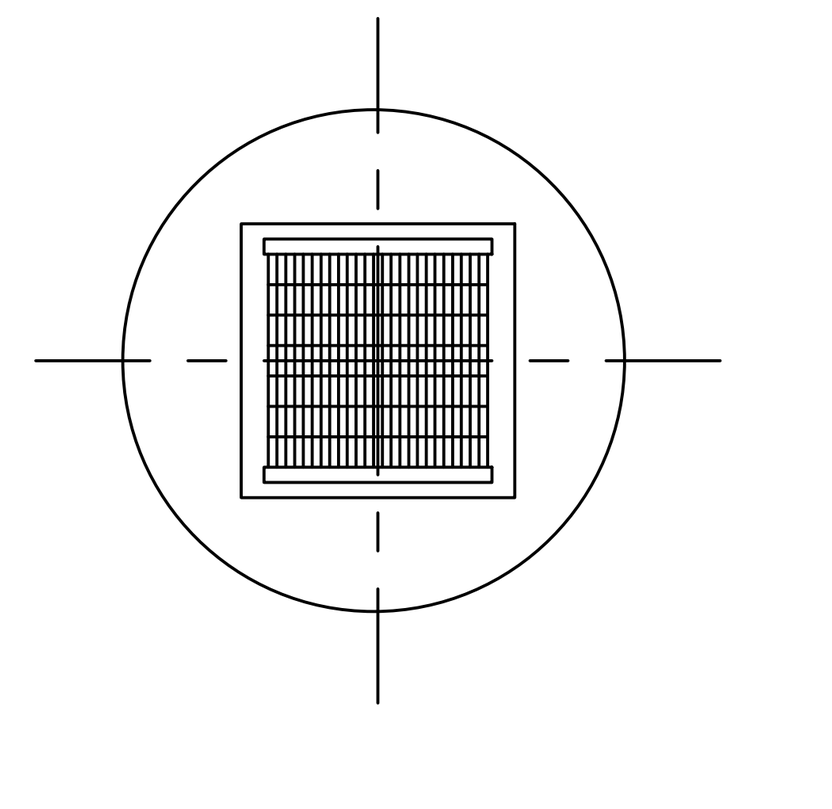
STATION AND OFFSET LOCATION FOR SQUARE/RECTANGULAR BASE INLETS



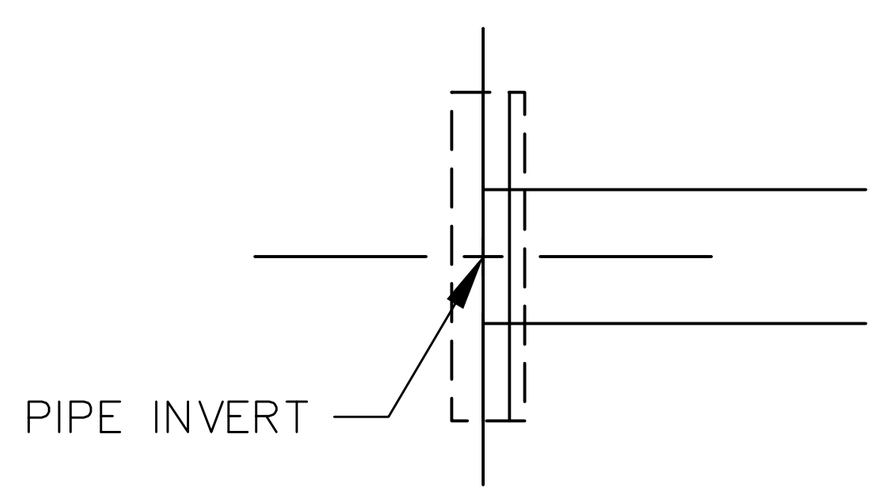
STATION AND OFFSET LOCATION FOR CIRCULAR MANHOLES



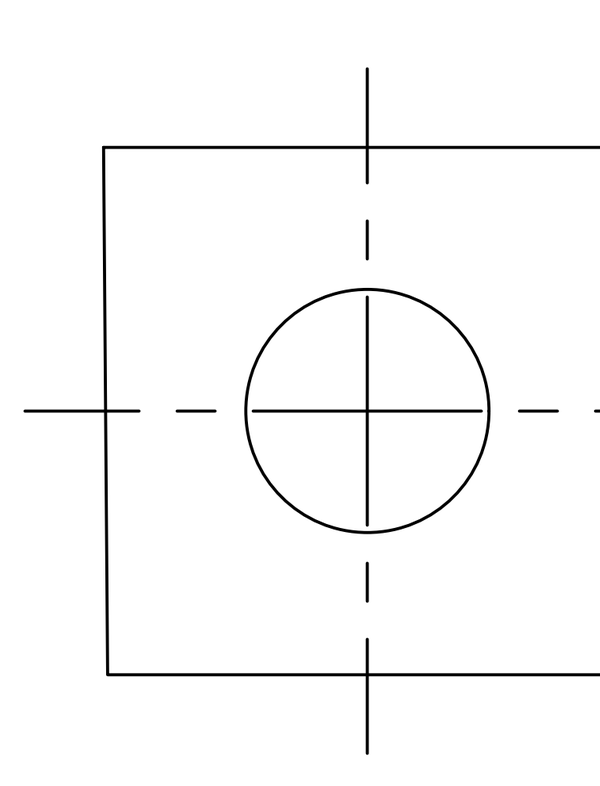
STATION AND OFFSET LOCATION FOR SQUARE MANHOLES



STATION AND OFFSET LOCATION FOR CIRCULAR BASE INLETS



STATION AND OFFSET LOCATION FOR ENDWALLS



STATION AND OFFSET LOCATION FOR JUNCTION BOXES

DRAFT
NOT FOR CONSTRUCTION

RJM ENGINEERING

NO.	REVISION	DATE	BY

MONTGOMERY COUNTY
DEPARTMENT OF TRANSPORTATION
GAITHERSBURG, MARYLAND

RECOMMENDED FOR APPROVAL

Chief, Design Section — Date

APPROVED

Chief, Division of Transportation Engineering — Date

Designed by: KJS Drawn by: LZ Checked by: DZ

DD-02
DRAINAGE DESIGN

DALE DRIVE SHARED USE PATH

SCALE: NOT TO SCALE DATE: NOVEMBER 2022

CIP No. : 502109 SHEET 32 of 181

DEPARTMENT OF PERMITTING SERVICES

Marc Elrich
County Executive

Mitra Pedoeem
Director

May 28, 2020

Mr. Kevin Schiefer, P.E.
RJM Engineering, Inc.
6031 University Blvd., Suite 290
Ellicott City, MD 21043

Re: **COMBINED STORMWATER MANAGEMENT CONCEPT/*SITE DEVELOPMENT STORMWATER MANAGEMENT PLAN*** for
Dale Drive Bike and Pedestrian Path
Preliminary Plan #:
SM File #: 285748
Tract Size/Zone: 4.41 Ac. / R-60
Total Concept Area: 4.41 Ac.
Watershed: Sligo Creek

Dear Mr. Schiefer:

Based on a review by the Department of Permitting Services Review Staff, the stormwater management concept for the above-mentioned site is **acceptable**. The stormwater management concept proposes to meet required stormwater management goals via ESD to the MEP with the use of micro-bioretention. Due to site constraints and existing conditions (i.e. underground utilities, slopes, soil characteristics, and spatial constraints) the request for a partial waiver of quality control and a full waiver of quantity control is granted.

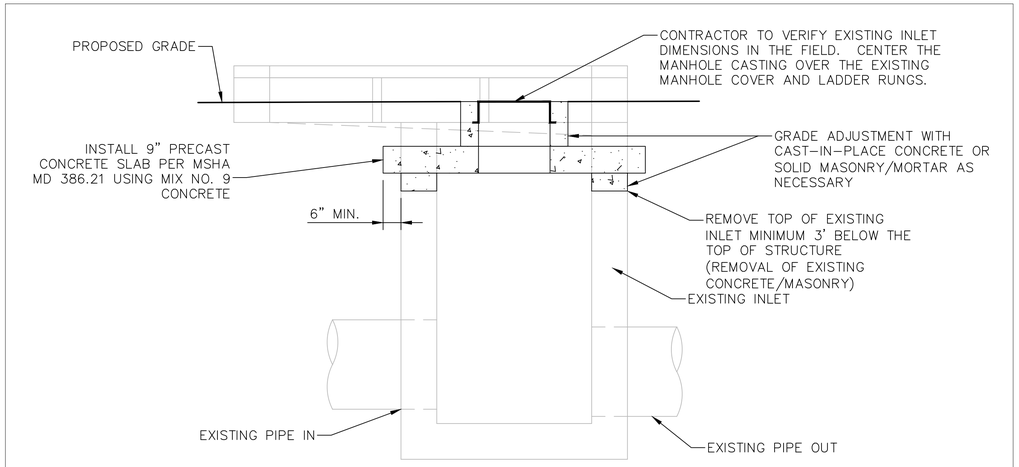
The following items will need to be addressed during the detailed sediment control/stormwater management plan stage:

1. A detailed review of the stormwater management computations will occur at the time of detailed plan review.
2. An engineered sediment control plan must be submitted for this development.
3. All filtration media for manufactured best management practices, whether for new development or redevelopment, must consist of MDE approved material.
4. Use MCDPS latest design criteria at the time of plan submittal.

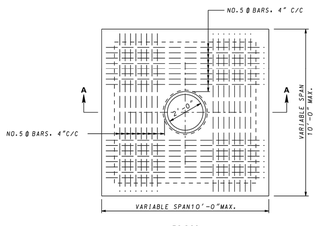
This list may not be all-inclusive and may change based on available information at the time.

Payment of a stormwater management contribution in accordance with Section 2 of the Stormwater Management Regulation 4-90 **is not required**. If a fee was due it would be in the amount of $52,474.00.

255 Rockville Pike, 2nd Floor, Rockville, Maryland 20850 | 240-777-0311
www.montgomerycountymd.gov/permittingservices



DETAIL: INLET CONVERSION TO JUNCTION BOX
NOT TO SCALE



PLAN



SECTION A-A

GENERAL NOTES

1. CONCRETE SHALL BE MIX NO.2
2. REINFOCEMENT- DEFORMED BARS
3. MANHOLE CASTINGS:- INSIDE DIA.- 2'-0"
4. MANHOLE CASTINGS:- MAXIMUM DEPTH- 0'-7"
5. ALL MATERIAL TO CONFORM TO S.H.A. SPECIFICATIONS
6. SLAB HAS BEEN DESIGNED FOR HS-25 LOADING, ACCORDING TO AASHTO LRFD BRIDGE SPECIFICATIONS.

SPECIFICATION 305	CATEGORY CODE ITEMS	Maryland Department of Transportation STATE HIGHWAY ADMINISTRATION
APPROVED	DIRECTOR - OFFICE OF HIGHWAY DEVELOPMENT	STANDARDS FOR HIGHWAYS AND INCIDENTAL STRUCTURES
SHA State Highway Administration	APPROVAL • SHA REVISIONS / APPROVAL • FEDERAL HIGHWAY ADMINISTRATION	PRE-CAST REINFORCED CONCRETE SLAB
APPROVAL 2-7-51 / APPROVAL 3-23-56		
REVISED - / REVISED 9-30-75		
REVISED 10-7-14 / REVISED 9-29-14		
REVISED / REVISED		STANDARD NO. MD 386.21

DRAFT
NOT FOR CONSTRUCTION

RJM ENGINEERING

NO.	REVISION	DATE	BY

MONTGOMERY COUNTY
DEPARTMENT OF TRANSPORTATION
GAITHERSBURG, MARYLAND

RECOMMENDED FOR APPROVAL

Chief, Design Section — Date

APPROVED

Chief, Division of Transportation Engineering — Date

Designed by: KJS Drawn by: LZ Checked by: DZ

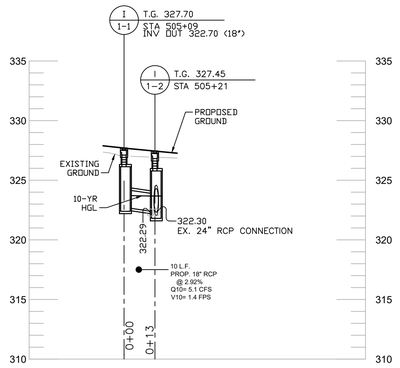
DD-03
DRAINAGE DESIGN

DALE DRIVE SHARED USE PATH

SCALE: NOT TO SCALE DATE: NOVEMBER 2022

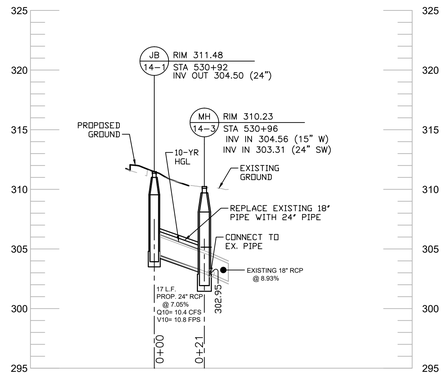
CIP No.: 502109 SHEET 33 of 181

FILE NAME: P:\MoCo\Dale Drive Bike-Ped Path\00_Working\pDT-P001_DaleDr.dwg LAYOUT NAME: DD-03 (Details) PLOTTED: Tuesday, November 22, 2022 - 2:57pm USER: kevin



I-1-1 to I-1-2

SCALE: HORIZ. 1"=30' VERT. 1"=6'

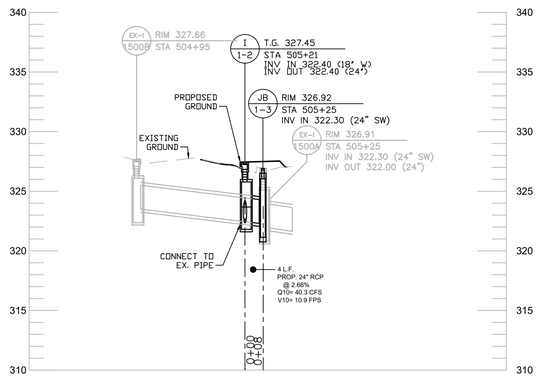


JB-14-1 to MH-14-3

SCALE: HORIZ. 1"=30' VERT. 1"=6'

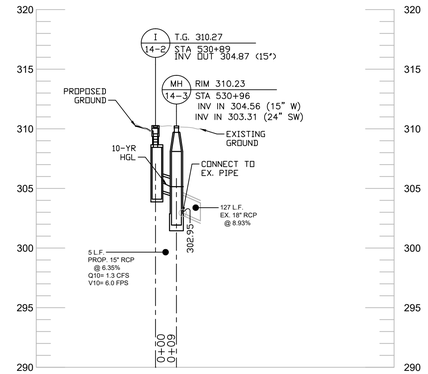
DESIGN NOTES:

1. PIPE FLOWS CONVEYING OFF-SITE DRAINAGE WERE ESTIMATED ASSUMING PIPE-FULL FLOW USING MANNING'S EQUATION.



I-1-2 to JB-1-3

SCALE: HORIZ. 1"=30' VERT. 1"=6'



I-14-2 to MH-14-3

SCALE: HORIZ. 1"=30' VERT. 1"=6'

0 6' 12'

VERTICAL SCALE: 1"=6'

0 30' 60'

HORIZONTAL SCALE: 1"=30'

DRAFT
NOT FOR CONSTRUCTION

RJM ENGINEERING

NO.	REVISION	DATE	BY

MONTGOMERY COUNTY
DEPARTMENT OF TRANSPORTATION
GAITHERSBURG, MARYLAND

RECOMMENDED FOR APPROVAL

Chief, Design Section — Date

APPROVED

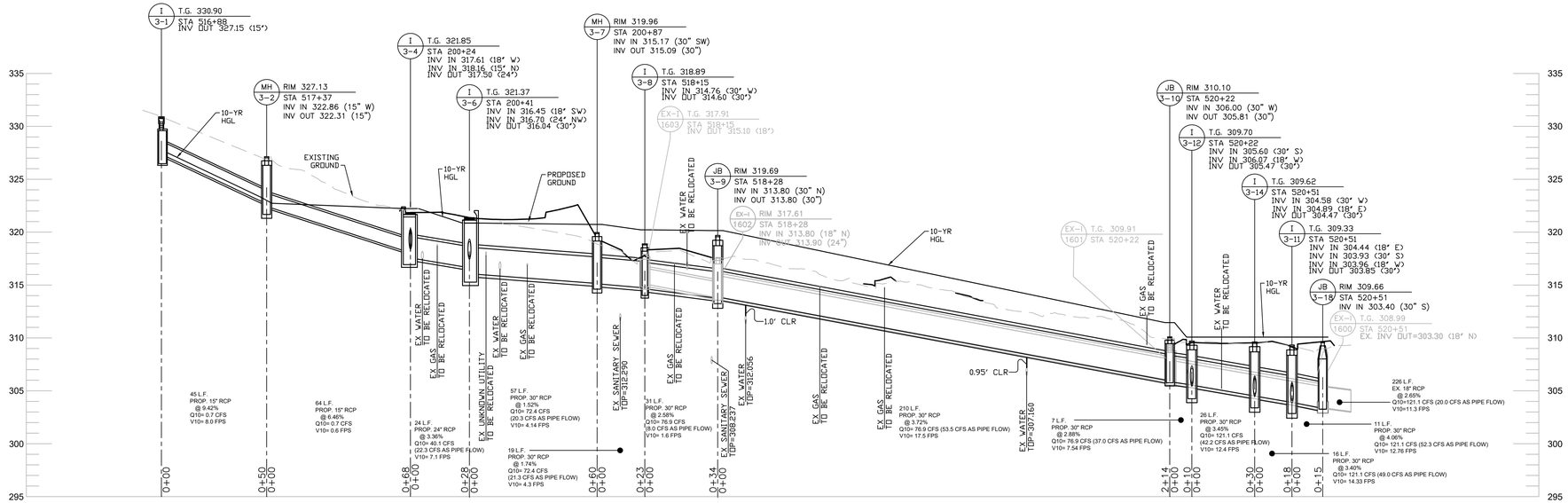
Chief, Division of Transportation Engineering — Date

Designed by: KJS Drawn by: LZ Checked by: DZ

DP-01 DRAINAGE PROFILE
DRAINAGE DESIGN
DALE DRIVE SHARED USE PATH

SCALE: AS NOTED DATE: NOVEMBER 2022

CIP No. : 502109 SHEET 34 of 181

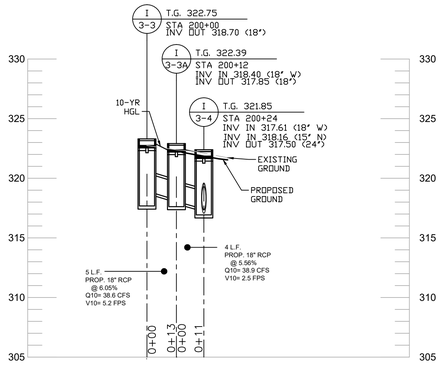


I-3-1 to JB-3-18

SCALE: HORIZ. 1"=30' VERT. 1"=6'

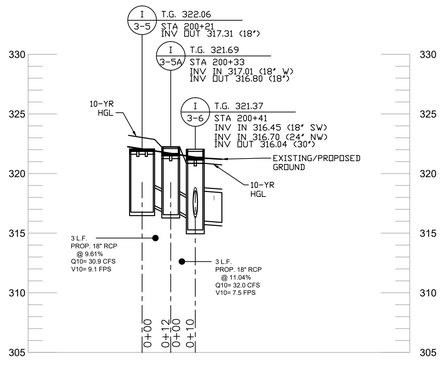
DESIGN NOTES:

1. FLOW IS INLET CONTROLLED AT THE EXISTING 24" PIPE LEAVING JUNCTION BOX JB-3-18 (I.E., CONVERTED EXISTING INLET EX-I-1600).
2. HEADWATER ELEVATIONS FOR THE 10-YEAR STORM EXCEED THE TOP OF CURB ELEVATION AT THE EXISTING SUMP LOCATION ALONG DALE DRIVE (STA. 520+51). HEADWATER ELEVATIONS ARE CONTROLLED BY THE EXISTING 24" PIPE DOWNSTREAM FROM THE PROPOSED WORK LIMITS.
3. NO ADDITIONAL DRAINAGE AREA IS DIVERTED TO THE SUMP LOCATION UNDER PROPOSED CONDITIONS. THE EXISTING-CONDITIONS DRAINAGE AREA TO THE SUMP INLETS ON DALE DRIVE AT STA. 520+51 EXCEEDS 35 ACRES.



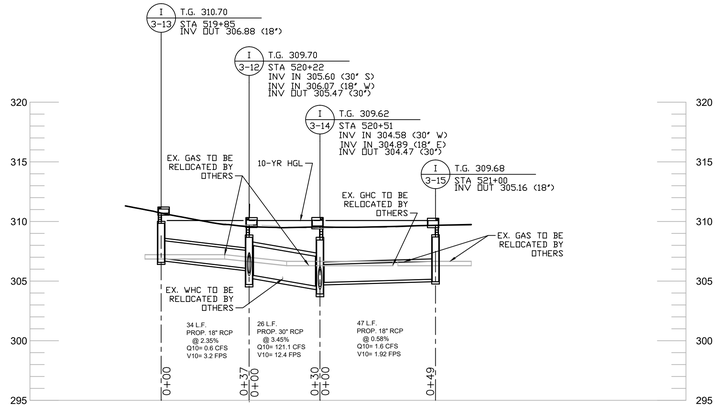
I-3-3 to I-3-4

SCALE: HORIZ. 1"=30' VERT. 1"=6'



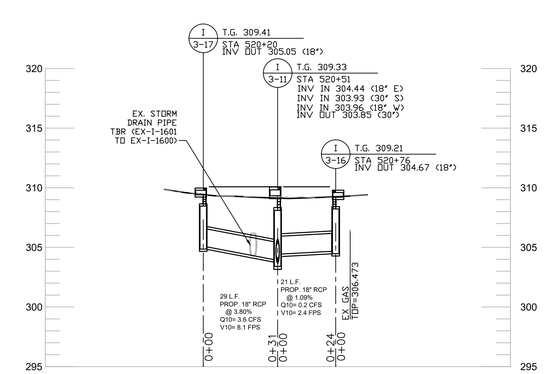
I-3-5 to I-3-6

SCALE: HORIZ. 1"=30' VERT. 1"=6'



I-3-13 to I-3-15

SCALE: HORIZ. 1"=30' VERT. 1"=6'



I-3-12 TO I-3-16

SCALE: HORIZ. 1"=30' VERT. 1"=6'

0 6' 12'
VERTICAL SCALE: 1"=6'

0 30' 60'
HORIZONTAL SCALE: 1"=30'

DRAFT
NOT FOR CONSTRUCTION

RJM ENGINEERING

NO.	REVISION	DATE	BY

MONTGOMERY COUNTY
DEPARTMENT OF TRANSPORTATION
GAITHERSBURG, MARYLAND

RECOMMENDED FOR APPROVAL

Chief, Design Section — Date

APPROVED

Chief, Division of Transportation Engineering — Date

Designed by: KJS Drawn by: LZ Checked by: DZ

DP-02 DRAINAGE PROFILE DRAINAGE DESIGN

DALE DRIVE SHARED USE PATH

SCALE: AS NOTED DATE: NOVEMBER 2022

CIP No. : 502109 SHEET 35 of 181

FILE NAME: P:\MoCo\Dale Drive Bike-Ped Path\00_Working\pDP-P001-DaleDr.dwg LAYOUT NAME: DP-02 PLOTTED: Tuesday, November 22, 2022 - 2:30pm USER: kevin

EROSION AND SEDIMENT CONTROL – GENERAL NOTES

STANDARD EROSION AND SEDIMENT CONTROL NOTES

1. The permittee shall notify the Department of Permitting Services (DPS) forty–eight (48) hours before commencing any land disturbing activity and, unless waived by the Department, shall be required to hold a pre–construction meeting between them or their representative, their engineer and an authorized representative of the Department.

2. The permittee must obtain inspection and approval by DPS at the following points:

   A. At the required pre–construction meeting.

   B. Following installation of sediment control measures and prior to any other land disturbing activity.

   C. During the installation of a sediment basin or stormwater management structure at the required inspection points (see Inspection Checklist on plan). Notification prior to commencing construction is mandatory.

   D. Prior to removal or modification of any sediment control structure(s).

   E. Prior to final acceptance.

3. The permittee shall construct all erosion and sediment control measures per the approved plan and construction sequence, shall have them inspected and approved by the Department prior to beginning any other land disturbances, shall ensure that all runoff from disturbed areas is directed to the sediment control devices, and shall not remove any erosion or sediment control measure without prior permission from the Department.

4. The permittee shall protect all points of construction ingress and egress to prevent the deposition of materials onto traversed public thoroughfare(s). All materials deposited onto public thoroughfare(s) shall be removed immediately.

5. The permittee shall inspect periodically and maintain continuously in effective operating condition, all erosion and sediment control measures until such time as they are removed with prior permission from the Department. The permittee is responsible for immediately repairing or replacing any sediment control measures which have been damaged or removed by the permittee or any other person.

6. Following initial soil disturbance or re–disturbance, permanent or temporary stabilization must be completed within:

   a) Three (3) calendar days as to the surface of all perimeter dikes, swales, ditches, perimeter slopes and all slopes steeper than 3 horizontal to 1 vertical (3:1); and

   b) Seven (7) calendar days as to all other disturbed or graded areas on the project site not under active grading.

   All areas disturbed outside of the perimeter sediment control system must be minimized and stabilized immediately. Maintenance must be performed as necessary to ensure continued stabilization.

7. The permittee shall apply sod, seed and anchored straw mulch, or other approved stabilization measures to all disturbed areas within seven (7) calendar days after stripping and grading activities have ceased on that area. Maintenance shall be performed as necessary to ensure continued stabilization. Active construction areas such as borrow or stockpile areas, roadway improvements, and areas within fifty (50) feet of a building under construction may be exempt from this requirement, provided that erosion and sediment control measures are installed and maintained to protect those areas.

8. Prior to removal of sediment control measures, the permittee shall stabilize all contributory disturbed areas with required soil amendments and topsoil, using sod or an approved permanent seed mixture and an approved anchored mulch. Wood fiber mulch may only be used in seeding season when the slope does not exceed 10% and grading has been done to promote sheet flow drainage. Areas brought to finished grade during the seeding season shall be permanently stabilized within seven (7) calendar days of establishment. When property is brought to finished grade during the months of November through February, and permanent stabilization is found to be impractical, an approved temporary seed and straw anchored mulch shall be applied to disturbed areas. The final permanent stabilization of such property shall be completed prior to the following April 15.

9. The site permit, work, materials, approved SC/SM plans, and test reports shall be available at the site for inspection by duly authorized officials of Montgomery County.

10. Surface drainage flows over unstabilized cut and fill slopes shall be controlled by either preventing drainage flows from traversing the slopes or by installing mechanical devices to lower the water down slope without causing erosion. Dikes shall be installed and maintained at the top of cut or fill slopes until the slope and drainage area to it are fully stabilized, at which time they must be removed and final grading done to promote sheet flow drainage. Mechanical devices must be provided at points of concentrated flow where erosion is likely to occur.

11. Permanent swales or other points of concentrated water flow shall be stabilized within 3 calendar days of establishment with sod or seed with an approved erosion control matting or by other approved stabilization measures.

12. Sediment control devices shall be removed, with permission of the Department, within thirty (30) calendar days following establishment of permanent stabilization in all contributory drainage areas. Stormwater management structures used temporarily for sediment control shall be converted to the permanent configuration within this time period as well.

13. No permanent cut or fill slope with a gradient steeper than 3:1 will be permitted in lawn maintenance areas or on residential lots. A slope gradient of up to 2:1 will be permitted in non– maintenance areas provided that those areas are indicated on the erosion and sediment control plan with a low–maintenance ground cover specified for permanent stabilization. Slope gradient steeper than 2:1 will not be permitted with vegetative stabilization.

14. The permittee shall install a splashblock at the bottom of each downspout unless the downspout is connected by a drain line to an acceptable outlet.

15. For finished grading, the permittee shall provide adequate gradients so as to prevent water from standing on the surface of lawns more than twenty–four (24) hours after the end of a rainfall, except in designated drainage courses and swale flow areas, which may drain as long as forty–eight (48) hours after the end of a rainfall.

16. Sediment traps or basins are not permitted within 20 feet of a building which is existing or under construction. No building may be constructed within 20 feet of a sediment trap or basin.

17. All inlets in non–sump areas shall have asphalt berms installed at the time of base paving establishment.

18. The sediment control inspector has the option of requiring additional sediment control measures, as deemed necessary.

19. All trap elevations are relative to the outlet elevation, which must be on existing undisturbed ground.

20. Vegetative stabilization shall be performed in accordance with the Standards and Specifications for Soil Erosion and Sediment Control.

21. Sediment trap(s)/basin(s) shall be cleaned out and restored to the original dimensions when sediment has accumulated to the point of one–half (1/2) the wet storage depth of the trap/basin (1/4 the wet storage depth for ST–III) or when required by the sediment control inspector.

22. Sediment removed from traps/basins shall be placed and stabilized in approved areas, but not within a floodplain.

23. All sediment basins and traps must be surrounded with a welded wire safety fence. The fence must be at least 42 inches high, have posts spaced no farther apart than 8 feet, have mesh openings no greater the two inches in width and four inches in height, with a minimum of 14 gauge wire. Safety fence must be maintained in good condition at all times.

24. No excavation in the areas of existing utilities is permitted unless their location has been determined. Call "Miss Utility" at 1–800–257–7777, 48 hours prior to the start of work.

25. Off–site spoil or borrow areas must have prior approval by DPS.

26. Sediment trap/basin dewatering for cleanout or repair may only be done with the DPS inspector's permission. The inspector must approve the dewatering method for each application. The following methods may be considered:

   A. Pump discharge may be directed to another on–site sediment trap or basin, provided it is of sufficient volume and the pump intake is floated to prevent agitation or suction of deposited sediments; or

   B. the pump intake may utilize a Removable Pumping Station and must discharge into an undisturbed area through a non–erosive outlet; or

   C. the pump intake may be floated and discharge into a Dirt Bag (12 oz. non–woven fabric), or approved equivalent, located in an undisturbed buffer area.
   Remember: Dewatering operation and method must have prior approval by the DPS inspector.

27. The permittee must notify the Department of all utility construction activities within the permitted limits of disturbance prior to the commencement of those activities.

28. Topsoil must be applied to all pervious areas within the limits of disturbance prior to permanent stabilization in accordance with MDE "Standards and Specifications for Soil Preparation, Topsoiling, and Soil Amendments".

STANDARD SYMBOLS

AT–GRADE INLET PROTECTION	AGIP	REMOVABLE PUMPING STATION	RPS
BAFFLE BOARDS	BB	RIPRAP INFLOW PROTECTION	RRP
BENCHING	BENCHING	RIPRAP OUTLET SEDIMENT TRAP ST III	ST–III
CATCH BASIN INSERT	CBI	ROCK OUTLET PROTECTION 1	ROP1
CLEAR WATER DIVERSION PIPE	CWD – 12 (DESIGNATION CWD–12 REFERS TO 12 INCH CLEAR WATER DIVERSION)	ROCK OUTLET PROTECTION II	ROPII
CLEAR WATER PIPE	CWP	ROCK OUTLET PROTECTION III	ROPIII
COMBINATION INLET PROTECTION	COIP	SILT FENCE	SF
CONCRETE WASHOUT STRUCTURE	CWS	SILT FENCE ON PAVEMENT	SFOP
CURB INLET PROTECTION	CIP	SOD	
DIVERSION FENCE	DF	STABILIZED CONSTRUCTION ENTRANCE	SCE
EARTH DIKE	A–1 (PLACE DESIGNATION (A–1, B–2, etc.) ON FLOW CHANNEL SIDE OF DIKE)	STANDARD INLET PROTECTION	SIP
EMERGENCY SPILLWAY	ES	STOCKPILE AREA	
FILTER BAG	FB	STONE CHECK DAM	CD
FILTER BERM	FB–A / FB–B	STONE/RIPRAP OUTLET SEDIMENT TRAP ST II	ST–II
FILTER LOG	FL–18 (DESIGNATION FL–18 REFERS TO 18 INCH DIAMETER FILTER LOG)	SUBSURFACE DRAINS	SSD
GABION INFLOW PROTECTION	GP	SUMP PIT	SP
GABION INLET PROTECTION	GIP	SUPER SILT FENCE	SSF
HORIZONTAL DRAW–DOWN DEVICE	HDDD	TEMPORARY ACCESS BRIDGE	TB
LIMIT OF DISTURBANCE	LOD	TEMPORARY ACCESS CULVERT	TA
MEDIAN INLET PROTECTION	MIP	TEMPORARY ASPHALT BERM	TAB
MEDIAN SUMP INLET PROTECTION	MSIP	TEMPORARY BARRIER DIVERSION	TBD
MOUNTABLE BERM	MB	TEMPORARY GABION OUTLET STRUCTURE	TGOS
PERIMETER DIKE/SWALE	PDS–1	TEMP. SOIL STABILIZATION MATTING–TYPE A	
PERM. SOIL STABILIZATION MATTING–TYPE B		TEMP. SOIL STABILIZATION MATTING–TYPE E	
PERM. SOIL STABILIZATION MATTING–TYPE C		TEMP. SOIL STABILIZATION MATTING–TYPE D	
PIPE OUTLET SEDIMENT TRAP ST I	ST–I	TEMPORARY STONE OUTLET STRUCTURE	TSOS
PIPE SLOPE DRAIN	PSD – 12 (DESIGNATION PSD–12 REFERS TO 12 INCH PIPE SLOPE DRAIN)	TEMPORARY SWALE	A–1 (PLACE DESIGNATION (A–1, B–2, etc.) ON FLOW CHANNEL SIDE OF SWALE)
PLUNGE POOL	PP	WASH RACK OPTION	WR
PORTABLE SEDIMENT TANK	PST	CHESAPEAKE BAY CRITICAL AREA	
DRAINAGE BOUNDARY		TREE PROTECTION FENCE	TPF
EXISTING CONTOURS	100	WETLAND	
PROPOSED CONTOURS	100	WETLAND BUFFER	B
		100–YEAR FLOODPLAIN	

STANDARD NOTES

1. The contractor will immediately inform the county of any discrepancies found between the project plans and contract specifications.
2. For construction, all horizontal control shall be NAD 83/91 and vertical control NAVD 88.
3. Types of storm drain structures refer to the 'Design Standards' of Montgomery County Department of Transportation, unless otherwise noted.
4. Information concerning underground utilities was obtained from available records, The contractor must determine the exact location and elevations of the lines by digging test pits by hand at all utility crossings well in advance of trenching. If clearances are less than shown on this plan or six inches, whichever is less, the contractor shall contact the county.
5. Repairs to utilities or property damaged as a result of the contractor's negligence or method of operation must be made at the contractor's expense before proceeding with construction.
6. Call "Miss Utility" at 1–800–257–7777 fourty–eight (48) hours prior to beginning excavation to determine the exact location of existing utilities.
7. Clearing to be limited to the "limit of disturbance" as shown on the plans.
8. All grading shall be done in such a manner as to provide positive drainage.
9. Disturbed areas adjacent to established lawns shall be sodded. Other disturbed areas shall be seeded and mulched.
10. Any maintenance, treatment, planting, removal or root cutting on trees within the public right–of–way shall be performed in accordance with the Roadside Tree Permit requirements issued by the Department of Natural Resources – Maryland Forest, Park and Wildlife service whose telephone number is (301) 854–6060.
11. Contact the Washington Suburban Sanitary Commission system maintenance engineer before excavating beneath or in the vicinity of existing water or sewer lines. Backfill to be done under the supervision of W.S.S.C. call 301–699–4420.
12. Contact Washington gas dispatch officer at (703) 750–4831 before excavating beneath or in the vicinity of existing gas main and service laterals.
13. Prior to vegetative stabilization, all disturbed areas must be topsoiled per the Montgomery County "Standards and Specifications for topsoil".

STANDARD SEQUENCE OF CONSTRUCTION NOTES

1. Prior to clearing trees, installing sediment control measures, or grading, a preconstruction meeting must be conducted on–site with the Montgomery County Department of Permitting Services (MCDPS) sediment control inspector (240) 777–6210 (48 hours notice) and the MNCPPC, Planning Department, Plans Enforcement inspector (301) 495–4571 (48 hours notice), the Owners representative, and the site Engineer.
2. The limits of disturbance shall be field marked prior to clearing of trees, installation of sediment control measures, construction, or other land disturbing activities.
3. The permittee must obtain written approval from the MNCPPC inspector, certifying that the limits of disturbance and tree protection measures are correctly marked and installed prior to commencing any clearing.
4. Clear and grade for installation of sediment control devices.
5. Install sediment control devices. Traps and basins shall be constructed prior to construction of any earth dikes that convey drainage to a trap and/or basin.
6. Once the sediment control devices are installed, the permittee must obtain written approval from the MCDPS inspector before proceeding with any additional clearing, grubbing or grading.
7. The detailed sequence of construction by phase is presented on Sheets SC–06 thru SC–20.

NOTE 1: The permittee shall obtain written approval from MCDPS inspector, prior to the removal of any sediment control devices.

OFFSITE GRADING NOTE:
Offsite grading requires documentation of permission from owner (letter of permission on plan or recorded grading easement document submitted). Written approval for grading outside of the Right–of–Way shall be provided to the Inspector before construction is authorized to proceed.

STOCKPILE NOTE:
The Contractor shall establish staging and stockpile areas at locations approved by the Engineer. These areas shall be established such that environmentally sensitive areas are not impacted. Erosion sediment control measures such as silt fence shall be installed downgrade of the staging and stockpile areas and as directed by the Engineer, and diversions such as sandbags shall be placed upstream to prevent stormwater run–on from contacting the stockpile.

PHASED GRADING NOTE:
The contractor shall phase clearing and grading to minimize the area disturbed at a given time during connection. All areas not draininginto an approved sediment control measure shall receive same–day stabilization.

SITE INFORMATION		
DISTURBED AREA (LOD)	CUT (CY)	FILL (CY)
5.10 ac	7,701	677

P.E. CERTIFICATION

I HEREBY CERTIFY THAT THESE DOCUMENTS WERE PREPARED OR APPROVED BY ME, AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MARYLAND LICENSE NO. 43192 , EXPIRATION DATE: 12–19–24

DRAFT
NOT FOR CONSTRUCTION

RJM ENGINEERING

NO.	REVISION	DATE	BY

MONTGOMERY COUNTY
DEPARTMENT OF TRANSPORTATION
GAITHERSBURG, MARYLAND

RECOMMENDED FOR APPROVAL

Chief, Design Section — Date

APPROVED

Chief, Division of Transportation Engineering — Date

Designed by: KJS Drawn by: LZ Checked by: DZ

SC–01 NOTES SHEET
EROSION AND SEDIMENT CONTROL

DALE DRIVE SHARED USE PATH

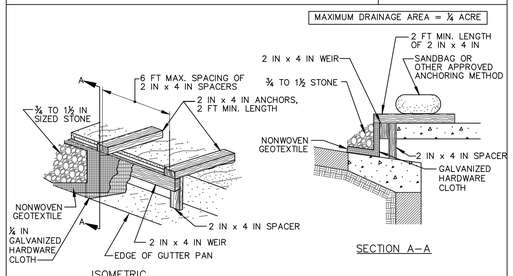
SCALE: NOT TO SCALE DATE: NOVEMBER 2022

CIP No. : 502109 SHEET 36 of 181

DETAIL E-9-3 CURB INLET PROTECTION

STANDARD SYMBOL: CIP

MAXIMUM DRAINAGE AREA = ¼ ACRE



ISOMETRIC

SECTION A–A

CONSTRUCTION SPECIFICATIONS

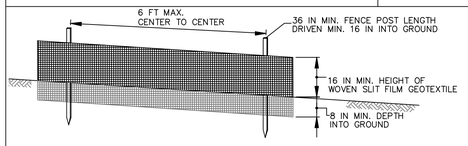
1. USE NOMINAL 2 INCH x 4 INCH LUMBER
2. USE NONWOVEN GEOTEXTILE AS SPECIFIED IN SECTION H–1 MATERIALS.
3. NAIL THE 2x4 WEIR TO 9 INCH LONG VERTICAL SPACERS (MAXIMUM 6 FEET APART).
4. ATTACH A CONTINUOUS PIECE OF ¼ INCH GALVANIZED HARDWARE CLOTH, WITH A MINIMUM WIDTH OF 30 INCHES AND A MINIMUM LENGTH OF 4 FEET LONGER THAN THE THROAT OPENING, TO THE 2x4 WEIR, EXTENDING IT 2 FEET BEYOND THROAT ON EACH SIDE.
5. PLACE A CONTINUOUS PIECE OF NONWOVEN GEOTEXTILE OF THE SAME DIMENSIONS AS THE HARDWARE CLOTH OVER THE HARDWARE CLOTH AND SECURELY ATTACH TO THE 2x4 WEIR.
6. PLACE THE ASSEMBLY AGAINST THE INLET THROAT AND NAIL TO 2x4 ANCHORS (MINIMUM 2 FEET LENGTH). EXTEND THE ANCHORS ACROSS THE INLET TOP AND HOLD IN PLACE BY SANDBAGS OR OTHER APPROVED ANCHORING METHOD.
7. INSTALL END SPACERS A MINIMUM OF 1 FOOT BEYOND THE ENDS OF THE THROAT OPENING.
8. FORM THE HARDWARE CLOTH AND THE GEOTEXTILE TO THE CONCRETE GUTTER AND FACE OF CURB TO SPAN THE INLET OPENING. COVER THE HARDWARE CLOTH AND GEOTEXTILE WITH CLEAN ¾ TO 1½ INCH STONE OR EQUIVALENT RECYCLED CONCRETE.
9. AT NON–SUMP LOCATIONS, INSTALL A TEMPORARY SANDBAG OR ASPHALT BERM TO PREVENT INLET BYPASS.
10. STORM DRAIN INLET PROTECTION REQUIRES FREQUENT MAINTENANCE. REMOVE ACCUMULATED SEDIMENT AFTER EACH RAIN EVENT TO MAINTAIN FUNCTION AND AVOID PREMATURE CLOGGING. IF INLET PROTECTION DOES NOT COMPLETELY DRAIN WITHIN 24 HOURS AFTER A STORM EVENT, IT IS CLOGGED. WHEN THIS OCCURS, REMOVE ACCUMULATED SEDIMENT AND CLEAN, OR REPLACE GEOTEXTILE AND STONE.

MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL

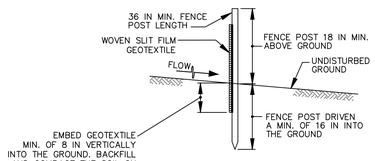
U.S. DEPARTMENT OF AGRICULTURE NATURAL RESOURCES CONSERVATION SERVICE	2011	MARYLAND DEPARTMENT OF ENVIRONMENT WATER MANAGEMENT ADMINISTRATION

DETAIL E-1 SILT FENCE

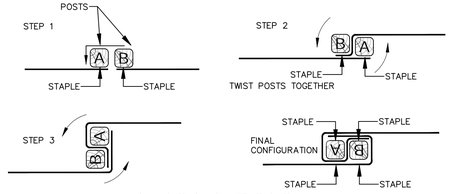
STANDARD SYMBOL: SF



ELEVATION



CROSS SECTION



JOINING TWO ADJACENT SILT FENCE SECTIONS (TOP VIEW)

1 OF 2

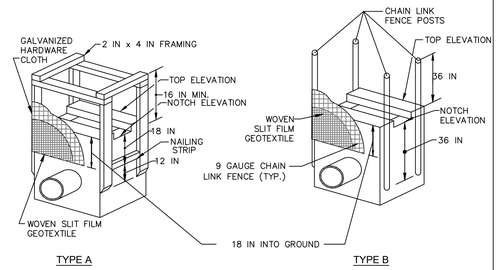
MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL

U.S. DEPARTMENT OF AGRICULTURE NATURAL RESOURCES CONSERVATION SERVICE	2011	MARYLAND DEPARTMENT OF ENVIRONMENT WATER MANAGEMENT ADMINISTRATION

DETAIL E-9-1 STANDARD INLET PROTECTION

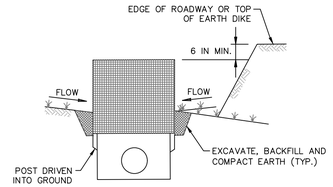
STANDARD SYMBOL: SIP

TYPE A MAXIMUM DRAINAGE AREA = ¼ ACRE
TYPE B MAXIMUM DRAINAGE AREA = 1 ACRE



TYPE A TYPE B

ISOMETRIC VIEW



SECTION FOR TYPE A AND B

1 OF 2

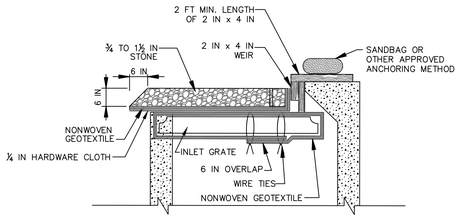
MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL

U.S. DEPARTMENT OF AGRICULTURE NATURAL RESOURCES CONSERVATION SERVICE	2011	MARYLAND DEPARTMENT OF ENVIRONMENT WATER MANAGEMENT ADMINISTRATION

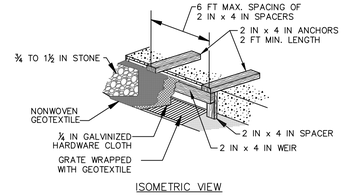
DETAIL E-9-6 COMBINATION INLET PROTECTION

STANDARD SYMBOL: COIP

MAXIMUM DRAINAGE AREA = ¼ ACRE



SECTION



ISOMETRIC VIEW

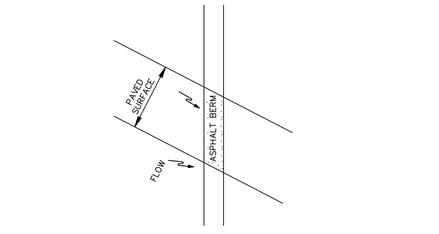
1 OF 2

MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL

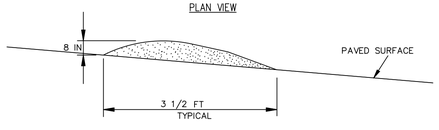
U.S. DEPARTMENT OF AGRICULTURE NATURAL RESOURCES CONSERVATION SERVICE	2011	MARYLAND DEPARTMENT OF ENVIRONMENT WATER MANAGEMENT ADMINISTRATION

DETAIL C-5 TEMPORARY ASPHALT BERM

STANDARD SYMBOL: TAB



PLAN VIEW



CROSS SECTION

CONSTRUCTION SPECIFICATIONS

1. CONSTRUCT BERM ON AN UNINTERRUPTED, CONTINUOUS GRADE.
2. INSTALL BERM TO CONFORM TO CROSS SECTION DIMENSIONS OF A UNIFORM HEIGHT OF 8 INCHES MINIMUM AND APPROXIMATE WIDTH OF 3½ FEET.
3. PROVIDE OUTLET PROTECTION AS REQUIRED ON PLAN.
4. COMPACT ASPHALT BERM.
5. REPAIR DAMAGED ASPHALT. REMOVE ACCUMULATED SEDIMENT AND DEBRIS. MAINTAIN POSITIVE DRAINAGE.
6. UPON REMOVAL OF ASPHALT BERM, RETURN TO ORIGINAL CONDITIONS OR AS SPECIFIED ON APPROVED PLAN.

MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL

U.S. DEPARTMENT OF AGRICULTURE NATURAL RESOURCES CONSERVATION SERVICE	2011	MARYLAND DEPARTMENT OF ENVIRONMENT WATER MANAGEMENT ADMINISTRATION

DETAIL E-1 SILT FENCE

STANDARD SYMBOL: SF

CONSTRUCTION SPECIFICATIONS

1. USE WOOD POSTS 1¾ X 1¾ ± ⅛ INCH (MINIMUM) SQUARE CUT OF SOUND QUALITY HARDWOOD. AS AN ALTERNATIVE TO WOODEN POST USE STANDARD "T" OR "U" SECTION STEEL POSTS WEIGHING NOT LESS THAN 1 POUND PER LINEAR FOOT.
2. USE 36 INCH MINIMUM POSTS DRIVEN 16 INCH MINIMUM INTO GROUND NO MORE THAN 6 FEET APART.
3. USE WOVEN SLIT FILM GEOTEXTILE AS SPECIFIED IN SECTION H–1 MATERIALS AND FASTEN GEOTEXTILE SECURELY TO UPSLOPE SIDE OF FENCE POSTS WITH WIRE TIES OR STAPLES AT TOP AND MID–SECTION.
4. PROVIDE MANUFACTURER CERTIFICATION TO THE AUTHORIZED REPRESENTATIVE OF THE INSPECTION/ENFORCEMENT AUTHORITY SHOWING THAT THE GEOTEXTILE USED MEETS THE REQUIREMENTS IN SECTION H–1 MATERIALS.
5. EMBED GEOTEXTILE A MINIMUM OF 8 INCHES VERTICALLY INTO THE GROUND. BACKFILL AND COMPACT THE SOIL ON BOTH SIDES OF FABRIC.
6. WHERE TWO SECTIONS OF GEOTEXTILE ADJOIN: OVERLAP, TWIST, AND STAPLE TO POST IN ACCORDANCE WITH THIS DETAIL.
7. EXTEND BOTH ENDS OF THE SILT FENCE A MINIMUM OF FIVE HORIZONTAL FEET UPSLOPE AT 45 DEGREES TO THE MAIN FENCE ALIGNMENT TO PREVENT RUNOFF FROM GOING AROUND THE ENDS OF THE SILT FENCE.
8. REMOVE ACCUMULATED SEDIMENT AND DEBRIS WHEN BULGES DEVELOP IN SILT FENCE OR WHEN SEDIMENT REACHES 25% OF FENCE HEIGHT. REPLACE GEOTEXTILE IF TORN. IF UNDERMINING OCCURS, REINSTALL FENCE.

2 OF 2

MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL

U.S. DEPARTMENT OF AGRICULTURE NATURAL RESOURCES CONSERVATION SERVICE	2011	MARYLAND DEPARTMENT OF ENVIRONMENT WATER MANAGEMENT ADMINISTRATION

DETAIL E-9-1 STANDARD INLET PROTECTION

STANDARD SYMBOL: SIP

CONSTRUCTION SPECIFICATIONS

1. USE WOVEN SLIT FILM GEOTEXTILE AS SPECIFIED IN SECTION H–1 MATERIALS.
2. EXCAVATE COMPLETELY AROUND THE INLET TO A DEPTH OF 18 INCHES BELOW THE NOTCH ELEVATION.
3. FOR TYPE A, USE NOMINAL 2 INCH X 4 INCH CONSTRUCTION GRADE LUMBER POSTS, DRIVEN 1 FOOT INTO THE GROUND AT EACH CORNER OF THE INLET. PLACE NAIL STRIPS BETWEEN THE POSTS ON THE ENDS OF THE INLET. ASSEMBLE THE TOP PORTION OF THE 2X4 FRAME AS SHOWN. STRETCH ½ INCH GALVANIZED HARDWARE CLOTH TIGHTLY AROUND THE FRAME AND FASTEN SECURELY. FASTEN GEOTEXTILE SECURELY TO THE HARDWARE CLOTH WITH TIES SPACED EVERY 24 INCHES AT THE TOP AND MID SECTION. EMBED GEOTEXTILE AND HARDWARE CLOTH A MINIMUM OF 18 INCHES BELOW THE WEIR CREST. THE ENDS OF THE GEOTEXTILE MUST MEET AT A POST, BE OVERLAPPED AND FOLDED, THEN FASTENED TO THE POST.

   FOR TYPE B, USE 2⅜ INCH DIAMETER GALVANIZED STEEL POSTS OF 0.095 INCH WALL THICKNESS AND 6 FOOT LENGTH, DRIVEN A MINIMUM OF 36 INCHES BELOW THE WEIR CREST AT EACH CORNER OF THE STRUCTURE. FASTEN 9 GAUGE OR HEAVIER CHAIN LINK FENCE, 42 INCHES IN HEIGHT, SECURELY TO THE FENCE POSTS WITH WIRE TIES, FASTEN GEOTEXTILE SECURELY TO THE CHAIN LINK FENCE WITH TIES SPACED EVERY 24 INCHES AT THE TOP AND MID SECTION. EMBED GEOTEXTILE AND CHAIN LINK FENCE A MINIMUM OF 18 INCHES BELOW THE WEIR CREST.
4. BACKFILL AROUND THE INLET IN LOOSE 4 INCH LIFTS AND COMPACT UNTIL SOIL IS LEVEL WITH THE NOTCH ELEVATION ON THE ENDS AND TOP ELEVATION ON THE SIDES.
5. STORM DRAIN INLET PROTECTION REQUIRES FREQUENT MAINTENANCE. REMOVE ACCUMULATED SEDIMENT AFTER EACH RAIN EVENT TO MAINTAIN FUNCTION AND AVOID PREMATURE CLOGGING. IF INLET PROTECTION DOES NOT COMPLETELY DRAIN WITHIN 24 HOURS AFTER A STORM EVENT, IT IS CLOGGED. WHEN THIS OCCURS, REMOVE ACCUMULATED SEDIMENT AND CLEAN, OR REPLACE GEOTEXTILE AND STONE.

2 OF 2

MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL

U.S. DEPARTMENT OF AGRICULTURE NATURAL RESOURCES CONSERVATION SERVICE	2011	MARYLAND DEPARTMENT OF ENVIRONMENT WATER MANAGEMENT ADMINISTRATION

DETAIL E-9-6 COMBINATION INLET PROTECTION

STANDARD SYMBOL: COIP

CONSTRUCTION SPECIFICATIONS

1. USE NOMINAL 2 INCH x 4 INCH LUMBER.
2. USE NONWOVEN GEOTEXTILE AS SPECIFIED IN SECTION H–1 MATERIALS.
3. LIFT GRATE, AND WRAP WITH NONWOVEN GEOTEXTILE TO COMPLETELY COVER ALL OPENINGS, THEN SET GRATE BACK IN PLACE.
4. ATTACH A CONTINUOUS PIECE OF ½ INCH GALVANIZED HARDWARE CLOTH WITH A MINIMUM WIDTH OF 30 INCHES AND A MINIMUM LENGTH OF 4 FEET LONGER THAN THE THROAT OPENING, TO THE 2X4 WEIR, EXTENDING 2 FEET BEYOND THROAT ON EACH SIDE.
5. PLACE A CONTINUOUS PIECE OF NONWOVEN GEOTEXTILE THE SAME DIMENSIONS AS THE HARDWARE CLOTH OVER THE HARDWARE CLOTH AND SECURELY ATTACH IT TO THE WEIR.
6. NAIL THE 2X4 WEIR TO THE TOP OF A 9 INCH LONG VERTICAL SPACER TO BE LOCATED BETWEEN THE WEIR AND THE INLET FACE (MAXIMUM 4 FEET APART).
7. PLACE THE ASSEMBLY AGAINST THE INLET THROAT AND NAIL TO 2X4 ANCHORS (MINIMUM 2 FOOT LENGTHS OF 2x4 INCH TO THE TOP OF THE WEIR AT SPACER LOCATIONS). EXTEND 2X4 ANCHORS ACROSS THE INLET TOP AND HOLD IN PLACE BY SANDBAGS OR OTHER APPROVED ANCHORING METHOD.
8. INSTALL END SPACERS A MINIMUM OF 1 FOOT BEYOND BOTH ENDS OF THE THROAT OPENING.
9. FORM THE ¼ INCH HARDWARE CLOTH AND THE GEOTEXTILE TO THE CONCRETE GUTTER AND AGAINST THE FACE OF THE CURB ON BOTH SIDES OF THE INLET. PLACE CLEAN ¾ TO 1½ INCH STONE OR EQUIVALENT RECYCLED CONCRETE OVER THE HARDWARE CLOTH AND GEOTEXTILE IN SUCH A MANNER TO PREVENT WATER FROM ENTERING THE INLET UNDER OR AROUND THE GEOTEXTILE.
10. AT NON–SUMP LOCATIONS, INSTALL A TEMPORARY SANDBAG OR ASPHALT BERM TO PREVENT INLET BYPASS.
11. STORM DRAIN INLET PROTECTION REQUIRES FREQUENT MAINTENANCE. REMOVE ACCUMULATED SEDIMENT AFTER EACH RAIN EVENT TO MAINTAIN FUNCTION AND AVOID PREMATURE CLOGGING. IF INLET PROTECTION DOES NOT COMPLETELY DRAIN WITHIN 24 HOURS AFTER A STORM EVENT, IT IS CLOGGED. WHEN THIS OCCURS, REMOVE ACCUMULATED SEDIMENT AND CLEAN, OR REPLACE GEOTEXTILE AND STONE.

2 OF 2

MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL

U.S. DEPARTMENT OF AGRICULTURE NATURAL RESOURCES CONSERVATION SERVICE	2011	MARYLAND DEPARTMENT OF ENVIRONMENT WATER MANAGEMENT ADMINISTRATION

DRAFT
NOT FOR CONSTRUCTION

RJM ENGINEERING

NO.	REVISION	DATE	BY

MONTGOMERY COUNTY
DEPARTMENT OF TRANSPORTATION
GAITHERSBURG, MARYLAND

RECOMMENDED FOR APPROVAL

Chief, Design Section — Date

APPROVED

Chief, Division of Transportation Engineering — Date

Designed by: KJS Drawn by: LZ Checked by: DZ

SC–02 DETAIL SHEET EROSION AND SEDIMENT CONTROL

DALE DRIVE SHARED USE PATH

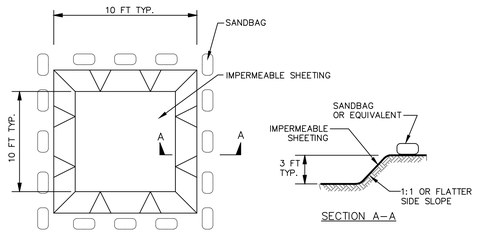
SCALE: NOT TO SCALE DATE: NOVEMBER 2022

CIP No. : 502109 SHEET 37 of 181

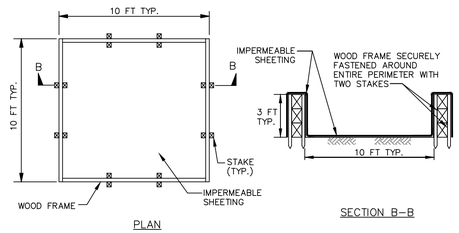
FILE NAME: P:\MoCo\Dale Drive Bike–Ped Path\00_Working\pES–P001_ESC Details_DaleDr.dwg LAYOUT NAME: SC–02 DETAIL PLOTTED: Tuesday, November 22, 2022 – 2:30pm USER: kevin

DETAIL H-6 ONSITE CONCRETE WASHOUT STRUCTURE

STANDARD SYMBOL: CWS



EXCAVATED WASHOUT STRUCTURE



WASHOUT STRUCTURE WITH WOOD PLANKS

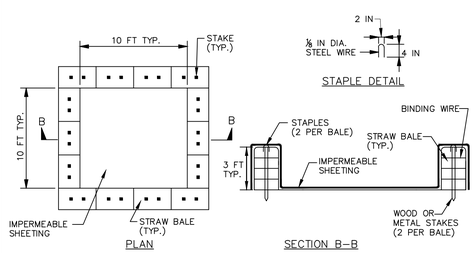
1 OF 2

MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL

U.S. DEPARTMENT OF AGRICULTURE NATURAL RESOURCES CONSERVATION SERVICE	2011	MARYLAND DEPARTMENT OF ENVIRONMENT WATER MANAGEMENT ADMINISTRATION

DETAIL H-6 ONSITE CONCRETE WASHOUT STRUCTURE

STANDARD SYMBOL: CWS



NOTE: CAN BE TWO STACKED BALES OR PARTIALLY EXCAVATED TO REACH 3 FT DEPTH

WASHOUT STRUCTURE WITH STRAW BALES

CONSTRUCTION SPECIFICATIONS

1. LOCATE WASHOUT STRUCTURE A MINIMUM OF 50 FEET AWAY FROM OPEN CHANNELS, STORM DRAIN INLETS, SENSITIVE AREAS, WETLANDS, BUFFERS AND WATER COURSES AND AWAY FROM CONSTRUCTION TRAFFIC.
2. SIZE WASHOUT STRUCTURE FOR VOLUME NECESSARY TO CONTAIN WASH WATER AND SOLIDS AND MAINTAIN AT LEAST 4 INCHES OF FREEBOARD. TYPICAL DIMENSIONS ARE 10 FEET X 10 FEET X 3 FEET DEEP.
3. PREPARE SOIL BASE FREE OF ROCKS OR OTHER DEBRIS THAT MAY CAUSE TEARS OR HOLES IN THE LINER. FOR LINER, USE 10 MIL OR THICKER UV RESISTANT, IMPERMEABLE SHEETING, FREE OF HOLES AND TEARS OR OTHER DEFECTS THAT COMPROMISE IMPERMEABILITY OF THE MATERIAL.
4. PROVIDE A SIGN FOR THE WASHOUT IN CLOSE PROXIMITY TO THE FACILITY.
5. KEEP CONCRETE WASHOUT STRUCTURE WATER TIGHT. REPLACE IMPERMEABLE LINER IF DAMAGED (E.G., RIPPED OR PUNCTURED). EMPTY OR REPLACE WASHOUT STRUCTURE THAT IS 75 PERCENT FULL, AND DISPOSE OF ACCUMULATED MATERIAL PROPERLY. DO NOT REUSE PLASTIC LINER. WET-VACUUM STORED LIQUIDS THAT HAVE NOT EVAPORATED AND DISPOSE OF IN AN APPROVED MANNER. PRIOR TO FORECASTED RAINSTORMS, REMOVE LIQUIDS OR COVER STRUCTURE TO PREVENT OVERFLOWS. REMOVE HARDENED SOLIDS, WHOLE OR BROKEN UP, FOR DISPOSAL OR RECYCLING. MAINTAIN RUNOFF DIVERSION AROUND EXCAVATED WASHOUT STRUCTURE UNTIL STRUCTURE IS REMOVED.

2 OF 2

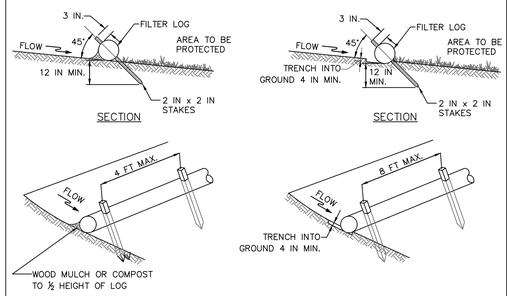
MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL

U.S. DEPARTMENT OF AGRICULTURE NATURAL RESOURCES CONSERVATION SERVICE	2011	MARYLAND DEPARTMENT OF ENVIRONMENT WATER MANAGEMENT ADMINISTRATION

DETAIL E-6 FILTER LOG

STANDARD SYMBOL: FL–18

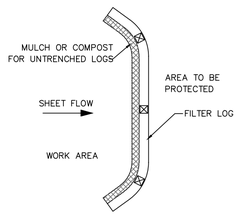
DESIGNATION FL–18 REFERS TO 18 INCH DIAMETER FILTER LOG.



OR

*THIS APPLICATION MAY NOT BE USED WITH LOGS SMALLER THAN 12 IN.

ISOMETRIC VIEW



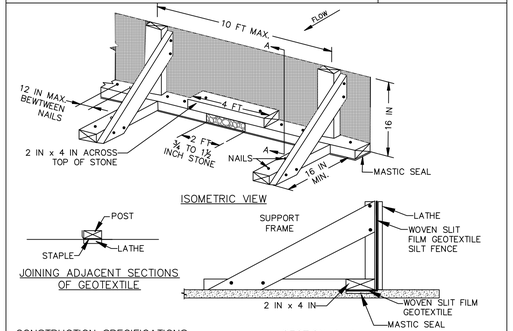
1 OF 2

MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL

U.S. DEPARTMENT OF AGRICULTURE NATURAL RESOURCES CONSERVATION SERVICE	2011	MARYLAND DEPARTMENT OF ENVIRONMENT WATER MANAGEMENT ADMINISTRATION

DETAIL E-2 SILT FENCE ON PAVEMENT

STANDARD SYMBOL: SFOP



CONSTRUCTION SPECIFICATIONS

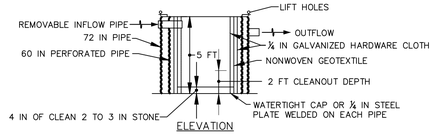
1. USE NOMINAL 2 INCH X 4 INCH LUMBER.
2. USE WOVEN SLIT FILM GEOTEXTILE, AS SPECIFIED IN SECTION H–1 MATERIALS.
3. PROVIDE MANUFACTURER CERTIFICATION TO THE AUTHORIZED REPRESENTATIVE OF THE INSPECTION/ENFORCEMENT AUTHORITY SHOWING THAT THE GEOTEXTILE USED MEETS THE REQUIREMENTS IN SECTION H–1 MATERIALS.
4. SPACE UPRIGHT SUPPORTS NO MORE THAN 10 FEET APART.
5. PROVIDE A TWO FOOT OPENING BETWEEN EVERY SET OF SUPPORTS AND PLACE STONE IN THE OPENING OVER GEOTEXTILE.
6. KEEP SILT FENCE TAUT AND SECURELY STAPLE TO THE UPSLOPE SIDE OF UPRIGHT SUPPORTS. EXTEND GEOTEXTILE UNDER 2x4.
7. WHERE TWO SECTIONS OF GEOTEXTILE ADJOIN: OVERLAP, FOLD, AND STAPLE TO POST IN ACCORDANCE WITH THIS DETAIL. ATTACH LATHE.
8. PROVIDE A MASTIC SEAL BETWEEN PAVEMENT, GEOTEXTILE, AND 2x4 TO PREVENT SEDIMENT–LADEN WATER FROM ESCAPING BENEATH SILT FENCE INSTALLATION.
9. SECURE BOARDS TO PAVEMENT WITH 40D 5 INCH MINIMUM LENGTH NAILS.
10. REMOVE ACCUMULATED SEDIMENT AND DEBRIS WHEN BULGES DEVELOP IN SILT FENCE OR WHEN SEDIMENT REACHES 25% OF FENCE HEIGHT. REPLACE GEOTEXTILE IF TORN. MAINTAIN WATER TIGHT SEAL ALONG BOTTOM. REPLACE STONE IF DISPLACED.

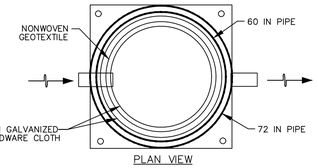
MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL

U.S. DEPARTMENT OF AGRICULTURE NATURAL RESOURCES CONSERVATION SERVICE	2011	MARYLAND DEPARTMENT OF ENVIRONMENT WATER MANAGEMENT ADMINISTRATION

DETAIL F-3 PORTABLE SEDIMENT TANK

STANDARD SYMBOL: ⊠PST





CONSTRUCTION SPECIFICATIONS

1. PROVIDE 1 CUBIC FOOT OF STORAGE FOR EACH GALLON PER MINUTE OF PUMP CAPACITY. REQUIRED STORAGE VOLUME MAY BE ATTAINED BY PLACEMENT OF TANKS IN PARALLEL WITH INFLOW EVENLY DISTRIBUTED AMONG TANKS. OVERTOPPING OF TANKS IS NOT PERMITTED.
2. USE 60 INCH CORRUGATED METAL OR PLASTIC PIPE WITH 1 INCH DIAMETER PERFORATIONS, 6 INCHES ON CENTER FOR THE INNER PIPE. LINE PIPE WITH NONWOVEN GEOTEXTILE, AS SPECIFIED IN SECTION H–1 MATERIALS, SANDWICHED BETWEEN, AND ATTACHED TO, ¼ INCH HARDWARE CLOTH.
3. OVERLAP GEOTEXTILE 8 INCHES MINIMUM AT VERTICAL SEAM AND AT THE BOTTOM PLATE.
4. ANCHOR GEOTEXTILE AT BOTTOM OF TANK WITH 4 INCHES OF 2 TO 3 INCH CLEAN STONE OR EQUIVALENT RECYCLED CONCRETE.
5. USE 72 INCH CORRUGATED METAL OR PLASTIC OUTER PIPE WITH PERMANENT OUTFLOW PIPE WITH INVERT LOWER THAN INFLOW PIPE
6. INFLOW PIPE MUST DISCHARGE INTO INNER PIPE AND BE REMOVABLE.
7. PLACE TANK ON LEVEL SURFACE AND DISCHARGE TO A STABLE AREA AT A NONEROSIVE RATE.
8. A PORTABLE SEDIMENT TANK REQUIRES FREQUENT MAINTENANCE. REMOVE ACCUMULATED SEDIMENT FROM INNER PIPE WHEN IT REACHES TWO FEET IN DEPTH. IF SYSTEM CLOGS, PULL OUT INNER PIPE, REMOVE ACCUMULATED SEDIMENT, AND REPLACE GEOTEXTILE. KEEP POINT OF DISCHARGE FREE OF EROSION.

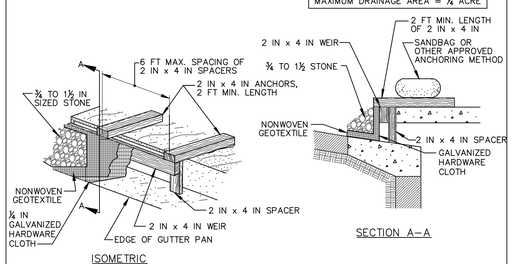
MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL

U.S. DEPARTMENT OF AGRICULTURE NATURAL RESOURCES CONSERVATION SERVICE	2011	MARYLAND DEPARTMENT OF ENVIRONMENT WATER MANAGEMENT ADMINISTRATION

DETAIL E-9-3 CURB INLET PROTECTION

STANDARD SYMBOL: CIP

MAXIMUM DRAINAGE AREA = ¼ ACRE



CONSTRUCTION SPECIFICATIONS

1. USE NOMINAL 2 INCH x 4 INCH LUMBER
2. USE NONWOVEN GEOTEXTILE AS SPECIFIED IN SECTION H–1 MATERIALS.
3. NAIL THE 2x4 WEIR TO 9 INCH LONG VERTICAL SPACERS (MAXIMUM 6 FEET APART).
4. ATTACH A CONTINUOUS PIECE OF ¼ INCH GALVANIZED HARDWARE CLOTH, WITH A MINIMUM WIDTH OF 30 INCHES AND A MINIMUM LENGTH OF 4 FEET LONGER THAN THE THROAT OPENING, TO THE 2x4 WEIR, EXTENDING IT 2 FEET BEYOND THROAT ON EACH SIDE.
5. PLACE A CONTINUOUS PIECE OF NONWOVEN GEOTEXTILE OF THE SAME DIMENSIONS AS THE HARDWARE CLOTH OVER THE HARDWARE CLOTH AND SECURELY ATTACH TO THE 2x4 WEIR.
6. PLACE THE ASSEMBLY AGAINST THE INLET THROAT AND NAIL TO 2x4 ANCHORS (MINIMUM 2 FEET LENGTH). EXTEND THE ANCHORS ACROSS THE INLET TOP AND HOLD IN PLACE BY SANDBAGS OR OTHER APPROVED ANCHORING METHOD.
7. INSTALL END SPACERS A MINIMUM OF 1 FOOT BEYOND THE ENDS OF THE THROAT OPENING.
8. FORM THE HARDWARE CLOTH AND THE GEOTEXTILE TO THE CONCRETE GUTTER AND FACE OF CURB TO SPAN THE INLET OPENING. COVER THE HARDWARE CLOTH AND GEOTEXTILE WITH CLEAN ¾ TO 1½ INCH STONE OR EQUIVALENT RECYCLED CONCRETE.
9. AT NON–SUMP LOCATIONS, INSTALL A TEMPORARY SANDBAG OR ASPHALT BERM TO PREVENT INLET BYPASS.
10. STORM DRAIN INLET PROTECTION REQUIRES FREQUENT MAINTENANCE. REMOVE ACCUMULATED SEDIMENT AFTER EACH RAIN EVENT TO MAINTAIN FUNCTION AND AVOID PREMATURE CLOGGING. IF INLET PROTECTION DOES NOT COMPLETELY DRAIN WITHIN 24 HOURS AFTER A STORM EVENT, IT IS CLOGGED. WHEN THIS OCCURS, REMOVE ACCUMULATED SEDIMENT AND CLEAN, OR REPLACE GEOTEXTILE AND STONE.

MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL

U.S. DEPARTMENT OF AGRICULTURE NATURAL RESOURCES CONSERVATION SERVICE	2011	MARYLAND DEPARTMENT OF ENVIRONMENT WATER MANAGEMENT ADMINISTRATION

DETAIL E-6 FILTER LOG

STANDARD SYMBOL: FL–18

DESIGNATION FL–18 REFERS TO 18 INCH DIAMETER FILTER LOG.

CONSTRUCTION SPECIFICATIONS

1. PRIOR TO INSTALLATION, CLEAR ALL OBSTRUCTIONS INCLUDING ROCKS, CLODS, AND DEBRIS GREATER THAN ONE INCH THAT MAY INTERFERE WITH PROPER FUNCTION OF FILTER LOG.
2. FILL LOG NETTING UNIFORMLY WITH COMPOST (IN ACCORDANCE WITH SECTION H–1 MATERIALS), OR OTHER APPROVED BIODEGRADABLE MATERIAL TO DESIRED LENGTH SUCH THAT LOGS DO NOT DEFORM.
3. INSTALL FILTER LOGS PERPENDICULAR TO THE FLOW DIRECTION AND PARALLEL TO THE SLOPE WITH THE BEGINNING AND END OF THE INSTALLATION POINTING SLIGHTLY UP THE SLOPE CREATING A "J" SHAPE AT EACH END TO PREVENT BYPASS.
4. FOR UNTRENCHED INSTALLATION BLOW OR HAND PLACE MULCH OR COMPOST ON UPHILL SIDE OF THE SLOPE ALONG LOG.
5. STAKE FILTER LOG EVERY 4 FEET OR CLOSER ALONG ENTIRE LENGTH OF LOG OR TRENCH LOG INTO GROUND A MINIMUM OF 4 INCHES AND STAKE LOG EVERY 8 FEET OR CLOSER.
6. USE STAKES WITH A MINIMUM NOMINAL CROSS SECTION OF 2X2 INCH AND OF SUFFICIENT LENGTH TO ATTAIN A MINIMUM OF 12 INCHES INTO THE GROUND AND 3 INCHES PROTRUDING ABOVE LOG.
7. WHEN MORE THAN ONE LOG IS NEEDED, OVERLAP ENDS 12 INCHES MINIMUM AND STAKE.
8. REMOVE SEDIMENT WHEN IT HAS ACCUMULATED TO A DEPTH OF ½ THE EXPOSED HEIGHT OF LOG AND REPLACE MULCH. REPLACE FILTER LOG IF TORN. REINSTALL FILTER LOG IF UNDERMINING OR DISLODGING OCCURS. REPLACE CLOGGED FILTER LOGS. FOR PERMANENT APPLICATIONS, ESTABLISH AND CONTINUOUSLY MEET REQUIREMENTS FOR ADEQUATE VEGETATIVE ESTABLISHMENT IN ACCORDANCE WITH SECTION B–4 VEGETATIVE STABILIZATION.

2 OF 2

MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL

U.S. DEPARTMENT OF AGRICULTURE NATURAL RESOURCES CONSERVATION SERVICE	2011	MARYLAND DEPARTMENT OF ENVIRONMENT WATER MANAGEMENT ADMINISTRATION

DRAFT
NOT FOR CONSTRUCTION

RJM ENGINEERING

NO.	REVISION	DATE	BY

MONTGOMERY COUNTY
DEPARTMENT OF TRANSPORTATION
GAITHERSBURG, MARYLAND

RECOMMENDED FOR APPROVAL

Chief, Design Section — Date

APPROVED

Chief, Division of Transportation Engineering — Date

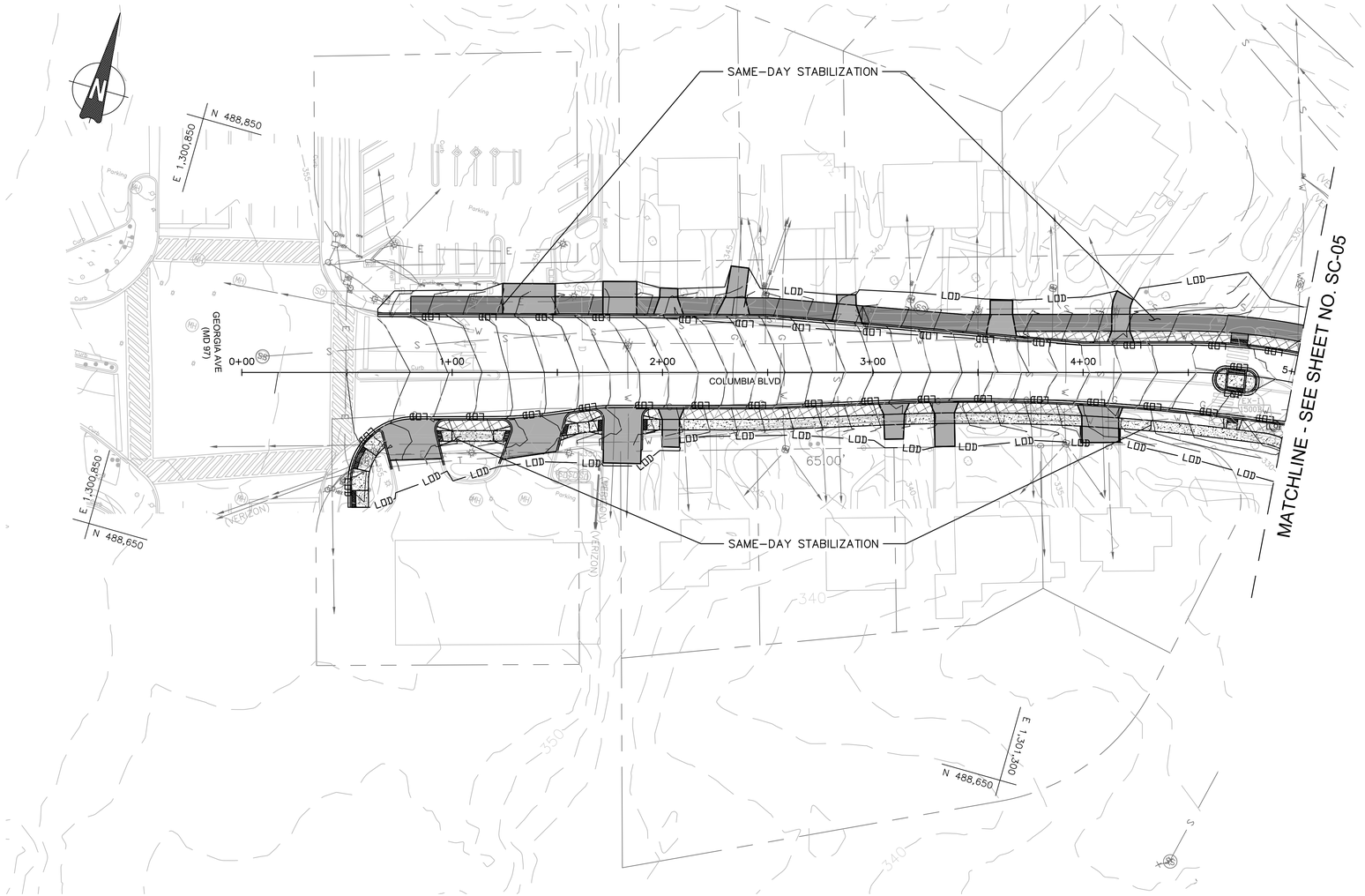
Designed by: KJS Drawn by: LZ Checked by: DZ

SC–03 DETAIL SHEET EROSION AND SEDIMENT CONTROL

DALE DRIVE SHARED USE PATH

SCALE: NOT TO SCALE DATE: NOVEMBER 2022

CIP No. : 502109 SHEET 38 of 181



LEGEND:

LIMIT OF DISTURBANCE	LOD
PAVEMENT REMOVAL	
CONCRETE SIDEWALK	
ASPHALT PATH/DRIVEWAY/ROAD	
COMBINATION INLET PROTECTION	COIP
CURB INLET PROTECTION	CIP
STANDARD INLET PROTECTION	SIP

GENERAL NOTES:

1. FOLLOWING THE INSTALLATION OF SEDIMENT CONTROLS, WRITTEN APPROVAL MUST BE OBTAINED FROM THE MCDPS INSPECTOR PRIOR TO PROCEEDING WITH WORK.
2. NO DISTURBED AREA SHALL BE LEFT UNSTABILIZED OVERNIGHT UNLESS THE RUNOFF IS DIRECTED TO A MCDPS-APPROVED SEDIMENT CONTROL DEVICE.
3. THE DEPOSITION OF ANY EARTH, GRAVEL, AND/OR OTHER MATERIAL OUTSIDE OF THE WORK AREA IS STRICTLY PROHIBITED. ALL SEDIMENT TRACKED ONTO PUBLIC RIGHT-OF-WAYS, OUTSIDE OF THE WORK AREA, MUST BE IMMEDIATELY REMOVED IF NOT DIVERTED TO A MCDPS-APPROVED SEDIMENT CONTROL DEVICE.
4. EROSION AND SEDIMENT CONTROL DEVICES AND/OR MEASURES ARE TO REMAIN IN PLACE UNTIL THEIR REMOVAL IS APPROVED IN WRITING BY THE MCDPS INSPECTOR. STABILIZE ANY DISTURBED AREAS RESULTING FROM REMOVAL OF THE SEDIMENT CONTROL DEVICES.
5. "DRY WEATHER FORECAST PER NOAA" SHALL BE CONSTRUED TO BE A FORECAST SHOWING A LIKELIHOOD OF PRECIPITATION AS BEING LESS THAN 20%.
6. AREAS OF SAME DAY STABILIZATION SHALL BE STABILIZED AS FOLLOWS: GRADED AGGREGATE BASE (OR PAVEMENT) FOR AREAS TO BE PAVED; SOIL STABILIZATION MATTING (SSM) FOR DITCHES WITHOUT BASEFLOW; AND SEED & MULCH FOR SOIL AREAS NOT IN DITCHES OR STREAMS.

DRAFT
NOT FOR CONSTRUCTION

RJM ENGINEERING

NO.	REVISION	DATE	BY

MONTGOMERY COUNTY
DEPARTMENT OF TRANSPORTATION
GAITHERSBURG, MARYLAND

RECOMMENDED FOR APPROVAL

Chief, Design Section — Date

APPROVED

Chief, Division of Transportation Engineering — Date

Designed by: KJS Drawn by: LZ Checked by: DZ

SC-04 PLAN SHEET
EROSION AND SEDIMENT CONTROL
DALE DRIVE SHARED USE PATH

0 30' 60'

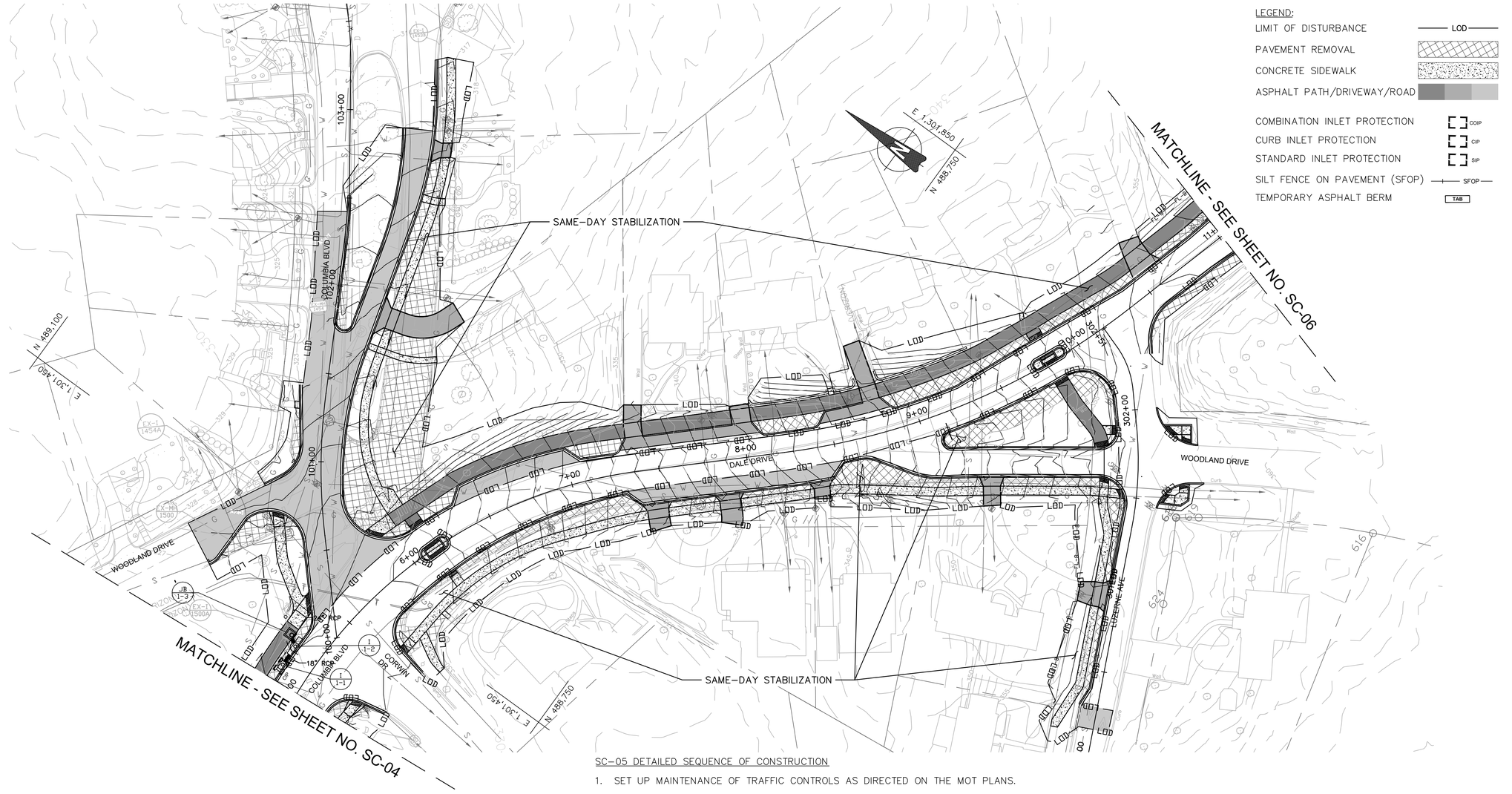
SCALE: 1"=30' DATE: NOVEMBER 2022

CIP No. : 502109 SHEET 39 of 181

FILE NAME: P:\MoCo\Dale Drive Bike-Ped Path\00_Working\pES-P002-DaleDr.dwg LAYOUT NAME: SC-04 PLOTTED: Tuesday, November 22, 2022 - 2:32pm USER: kevin

GENERAL NOTES:

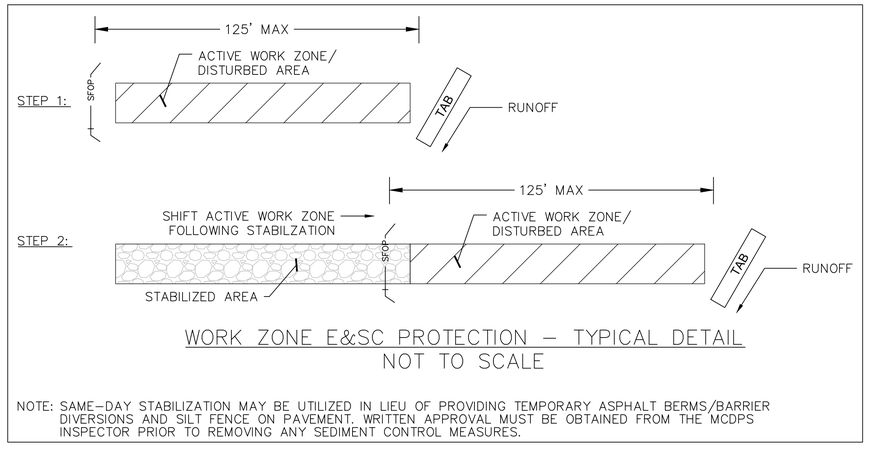
1. FOLLOWING THE INSTALLATION OF SEDIMENT CONTROLS, WRITTEN APPROVAL MUST BE OBTAINED FROM THE MCDPS INSPECTOR PRIOR TO PROCEEDING WITH WORK.
2. NO DISTURBED AREA SHALL BE LEFT UNSTABILIZED OVERNIGHT UNLESS THE RUNOFF IS DIRECTED TO A MCDPS–APPROVED SEDIMENT CONTROL DEVICE.
3. THE DEPOSITION OF ANY EARTH, GRAVEL, AND/OR OTHER MATERIAL OUTSIDE OF THE WORK AREA IS STRICTLY PROHIBITED. ALL SEDIMENT TRACKED ONTO PUBLIC RIGHT–OF–WAYS, OUTSIDE OF THE WORK AREA, MUST BE IMMEDIATELY REMOVED IF NOT DIVERTED TO A MCDPS–APPROVED SEDIMENT CONTROL DEVICE.
4. EROSION AND SEDIMENT CONTROL DEVICES AND/OR MEASURES ARE TO REMAIN IN PLACE UNTIL THEIR REMOVAL IS APPROVED IN WRITING BY THE MCDPS INSPECTOR. STABILIZE ANY DISTURBED AREAS RESULTING FROM REMOVAL OF THE SEDIMENT CONTROL DEVICES.
5. "DRY WEATHER FORECAST PER NOAA" SHALL BE CONSTRUED TO BE A FORECAST SHOWING A LIKELIHOOD OF PRECIPITATION AS BEING LESS THAN 20%.
6. AREAS OF SAME DAY STABILIZATION SHALL BE STABILIZED AS FOLLOWS: GRADED AGGREGATE BASE (OR PAVEMENT) FOR AREAS TO BE PAVED; SOIL STABILIZATION MATTING (SSM) FOR DITCHES WITHOUT BASEFLOW; AND SEED & MULCH FOR SOIL AREAS NOT IN DITCHES OR STREAMS.



SC–05 DETAILED SEQUENCE OF CONSTRUCTION

1. SET UP MAINTENANCE OF TRAFFIC CONTROLS AS DIRECTED ON THE MOT PLANS.
2. INSTALL INLET PROTECTION AS SHOWN ON THE PLAN.
3. CONSTRUCT PROPOSED PATH AND/OR ROADWAY LIMITING THE DISTURBED AREA TO THE EXTENT THAT CAN BE STABILIZED AT THE END OF EACH WORKDAY.
4. SILT FENCE ON PAVEMENT (SFOP) AND TEMPORARY ASPHALT BERMS (TAB) MAY BE INSTALLED TO PROTECT DISTURBED AREAS AND SHIFTED AS THE ACTIVE WORK AREA PROGRESSES, PROVIDED A MAXIMUM SLOPE OF 125' DRAINS TO THE SFOP. SEE WORK ZONE E&SC PROTECTION DETAIL, THIS SHEET.

   SAME–DAY STABILIZATION MAY BE PROVIDED FOR ALL DISTURBED AREAS IN LIEU OF INSTALLING TEMPORARY ASPHALT BERM/DIVERSION BARRIER AND SILT FENCE ON PAVEMENT.
5. DURING A 3–DAY, DRY–WEATHER PERIOD, CONVERT EXISTING INLET EX–I–1500A TO A JUNCTION BOX AN INSTALL INLET I–1–2 AND ASSOCIATED PIPING. INSTALL INLET I–1–1 AND PIPING TO I–1–2 IN A MANNER THAT ALLOWS FOR THE CONVEYANCE OF RUNOFF IN A NON–EROSIVE MANNER AT ALL TIMES.
6. REMOVAL OF EXISTING PAVEMENT SHALL BE LIMITED TO THE EXTENT THAT CAN BE STABILIZED THE SAME DAY.



WORK ZONE E&SC PROTECTION – TYPICAL DETAIL
NOT TO SCALE

NOTE: SAME–DAY STABILIZATION MAY BE UTILIZED IN LIEU OF PROVIDING TEMPORARY ASPHALT BERMS/BARRIER DIVERSIONS AND SILT FENCE ON PAVEMENT. WRITTEN APPROVAL MUST BE OBTAINED FROM THE MCDPS INSPECTOR PRIOR TO REMOVING ANY SEDIMENT CONTROL MEASURES.

DRAFT
NOT FOR CONSTRUCTION

RJM ENGINEERING

NO.	REVISION	DATE	BY

MONTGOMERY COUNTY
DEPARTMENT OF TRANSPORTATION
GAITHERSBURG, MARYLAND

RECOMMENDED FOR APPROVAL

Chief, Design Section — Date

APPROVED

Chief, Division of Transportation Engineering — Date

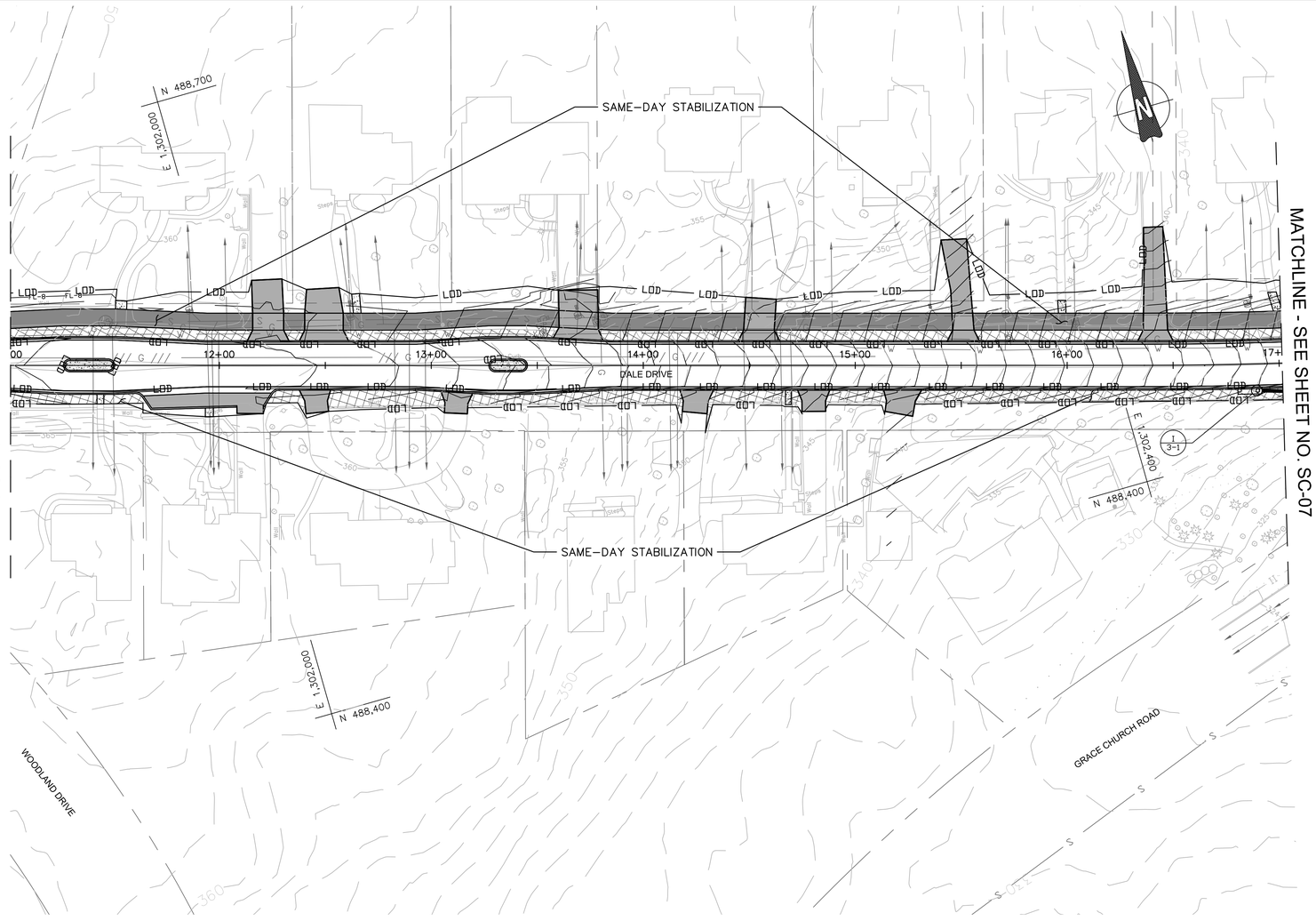
Designed by: KJS Drawn by: LZ Checked by: DZ

SC–05 PLAN SHEET
EROSION AND SEDIMENT CONTROL
DALE DRIVE SHARED USE PATH

0 30' 60'
SCALE: 1"=30'
DATE: NOVEMBER 2022

CIP No. : 502109
SHEET 40 of 181

MATCHLINE - SEE SHEET NO. SC-05



MATCHLINE - SEE SHEET NO. SC-07

LEGEND:

LIMIT OF DISTURBANCE	LOD
PAVEMENT REMOVAL	
CONCRETE SIDEWALK	
ASPHALT PATH/DRIVEWAY/ROAD	
COMBINATION INLET PROTECTION	COIP
CURB INLET PROTECTION	CIP
STANDARD INLET PROTECTION	SIP

GENERAL NOTES:

1. FOLLOWING THE INSTALLATION OF SEDIMENT CONTROLS, WRITTEN APPROVAL MUST BE OBTAINED FROM THE MCDPS INSPECTOR PRIOR TO PROCEEDING WITH WORK.
2. NO DISTURBED AREA SHALL BE LEFT UNSTABILIZED OVERNIGHT UNLESS THE RUNOFF IS DIRECTED TO A MCDPS-APPROVED SEDIMENT CONTROL DEVICE.
3. THE DEPOSITION OF ANY EARTH, GRAVEL, AND/OR OTHER MATERIAL OUTSIDE OF THE WORK AREA IS STRICTLY PROHIBITED. ALL SEDIMENT TRACKED ONTO PUBLIC RIGHT-OF-WAYS, OUTSIDE OF THE WORK AREA, MUST BE IMMEDIATELY REMOVED IF NOT DIVERTED TO A MCDPS-APPROVED SEDIMENT CONTROL DEVICE.
4. EROSION AND SEDIMENT CONTROL DEVICES AND/OR MEASURES ARE TO REMAIN IN PLACE UNTIL THEIR REMOVAL IS APPROVED IN WRITING BY THE MCDPS INSPECTOR. STABILIZE ANY DISTURBED AREAS RESULTING FROM REMOVAL OF THE SEDIMENT CONTROL DEVICES.
5. "DRY WEATHER FORECAST PER NOAA" SHALL BE CONSTRUED TO BE A FORECAST SHOWING A LIKELIHOOD OF PRECIPITATION AS BEING LESS THAN 20%.
6. AREAS OF SAME DAY STABILIZATION SHALL BE STABILIZED AS FOLLOWS: GRADED AGGREGATE BASE (OR PAVEMENT) FOR AREAS TO BE PAVED; SOIL STABILIZATION MATTING (SSM) FOR DITCHES WITHOUT BASEFLOW; AND SEED & MULCH FOR SOIL AREAS NOT IN DITCHES OR STREAMS.

DRAFT
NOT FOR CONSTRUCTION

RJM ENGINEERING

NO.	REVISION	DATE	BY

MONTGOMERY COUNTY
DEPARTMENT OF TRANSPORTATION
GAITHERSBURG, MARYLAND

RECOMMENDED FOR APPROVAL

Chief, Design Section — Date

APPROVED

Chief, Division of Transportation Engineering — Date

Designed by: KJS Drawn by: LZ Checked by: DZ

SC-06 PLAN SHEET
EROSION AND SEDIMENT CONTROL

DALE DRIVE SHARED USE PATH

0 30' 60'

SCALE: 1"=30'

DATE: NOVEMBER 2022

CIP No. : 502109

SHEET 41 of 181



GENERAL NOTES:

1. FOLLOWING THE INSTALLATION OF SEDIMENT CONTROLS, WRITTEN APPROVAL MUST BE OBTAINED FROM THE MCDPS INSPECTOR PRIOR TO PROCEEDING WITH WORK.
2. NO DISTURBED AREA SHALL BE LEFT UNSTABILIZED OVERNIGHT UNLESS THE RUNOFF IS DIRECTED TO A MCDPS-APPROVED SEDIMENT CONTROL DEVICE.
3. THE DEPOSITION OF ANY EARTH, GRAVEL, AND/OR OTHER MATERIAL OUTSIDE OF THE WORK AREA IS STRICTLY PROHIBITED. ALL SEDIMENT TRACKED ONTO PUBLIC RIGHT-OF-WAYS, OUTSIDE OF THE WORK AREA, MUST BE IMMEDIATELY REMOVED IF NOT DIVERTED TO A MCDPS-APPROVED SEDIMENT CONTROL DEVICE.
4. EROSION AND SEDIMENT CONTROL DEVICES AND/OR MEASURES ARE TO REMAIN IN PLACE UNTIL THEIR REMOVAL IS APPROVED IN WRITING BY THE MCDPS INSPECTOR. STABILIZE ANY DISTURBED AREAS RESULTING FROM REMOVAL OF THE SEDIMENT CONTROL DEVICES.
5. "DRY WEATHER FORECAST PER NOAA" SHALL BE CONSTRUED TO BE A FORECAST SHOWING A LIKELIHOOD OF PRECIPITATION AS BEING LESS THAN 20%.
6. AREAS OF SAME DAY STABILIZATION SHALL BE STABILIZED AS FOLLOWS: GRADED AGGREGATE BASE (OR PAVEMENT) FOR AREAS TO BE PAVED; SOIL STABILIZATION MATTING (SSM) FOR DITCHES WITHOUT BASEFLOW; AND SEED & MULCH FOR SOIL AREAS NOT IN DITCHES OR STREAMS.

SC-07 DETAILED SEQUENCE OF CONSTRUCTION

1. SET UP MAINTENANCE OF TRAFFIC (MOT) CONTROLS AS INDICATED ON THE MOT AND DETOUR PLANS.
2. CONSTRUCT MANHOLE MH-3-7 AND UPSTREAM DRAINAGE PIPES AND STRUCTURES (TO I-3-1, I-3-3, AND I-3-5). IMMEDIATELY BLOCK THE INLET OPENINGS TO PREVENT DRAINAGE FROM ENTERING THE INLETS. PROVIDE SAME-DAY STABILIZATION OF AREAS DISTURBED DURING INSTALLATION.
3. CONSTRUCT DRAINAGE PIPES AND INLETS BETWEEN EXISTING INLET EX-I-1601 (TO BE CONVERTED TO JUNCTION BOX JB-3-18) AND MANHOLE MH-3-7, BEGINNING DURING A NOAA 3-DAY DRY WEATHER FORECAST. CONTRACTOR SHALL ENSURE DRAINAGE CAN BE CONVEYED TO EXISTING INLET EX-I-1601 FROM EX-I-1603 (TO BE REPLACED BY I-3-8) AT ALL TIMES DURING CONSTRUCTION. TEMPORARY CONNECTIONS BETWEEN EXISTING DRAINAGE PIPES/STRUCTURES TO PROPOSED PIPES/STRUCTURES SHALL BE CONSTRUCTED AS REQUIRED TO CONVEY STORMWATER IN A NON-EROSIVE MANNER. CONSTRUCT FLANKING INLETS ALONG DALE DRIVE (I-3-12, I-3-13, I-3-15, AND I-3-16) AND ASSOCIATED PIPING.
4. FOLLOWING INSTALLATION OF STORM DRAIN PIPES AND STRUCTURES, INSTALL TYPE B STANDARD INLET PROTECTION (SIP) ON INLET I-3-8. INSTALL COMBINATION INLET PROTECTION (COIP) ON INLETS I-3-3A, I-3-4, I-3-5A, AND I-3-6. INSTALL CURB INLET PROTECTION (CIP) ON ALL INLETS ALONG DALE DRIVE.
5. INSTALL THE TEMPORARY ASPHALT BERM IMMEDIATELY DOWNSLOPE FROM INLETS I-3-3 AND I-3-5 AS SHOWN ON THE PLANS, CREATING A SUMP THAT COLLECTS UNDISTURBED, OFFSITE DRAINAGE AT EACH INLET.
6. CONDUCT GRADING AND ROADWAY CONSTRUCTION PROVIDING SAME DAY STABILIZATION TO ANY DISTURBED AREAS NOT DRAINING TO AN INLET WITH INLET PROTECTION.
7. ALL INLET PROTECTION SHALL REMAIN IN PLACE UNTIL FINAL STABILIZATION HAS BEEN ACHIEVED AND WRITTEN APPROVAL IS RECEIVED FROM THE MCDPS INSPECTOR.

LEGEND:

- LIMIT OF DISTURBANCE — LOD —
- PAVEMENT REMOVAL
- CONCRETE SIDEWALK
- ASPHALT PATH/DRIVEWAY/ROAD
- COMBINATION INLET PROTECTION [ ] COIP
- CURB INLET PROTECTION [ ] CIP
- STANDARD INLET PROTECTION [ ] SIP
- TEMPORARY ASPHALT BERM TAB

DRAFT
NOT FOR CONSTRUCTION

RJM ENGINEERING

NO.	REVISION	DATE	BY

MONTGOMERY COUNTY
DEPARTMENT OF TRANSPORTATION
GAITHERSBURG, MARYLAND

RECOMMENDED FOR APPROVAL

Chief, Design Section — Date

APPROVED

Chief, Division of Transportation Engineering — Date

Designed by: KJS Drawn by: LZ Checked by: DZ

SC-07 PLAN SHEET
EROSION AND SEDIMENT CONTROL
DALE DRIVE SHARED USE PATH

0 30' 60'

SCALE: 1"=30' DATE: NOVEMBER 2022

CIP No. : 502109 SHEET 42 of 181

FILE NAME: P:\MoCo\Dale Drive Bike-Ped Path\00_Working\pES-P002-DaleDr.dwg LAYOUT NAME: SC-07 PLOTTED: Tuesday, November 22, 2022 - 2:33pm USER: kevin



GENERAL NOTES:

1. FOLLOWING THE INSTALLATION OF SEDIMENT CONTROLS, WRITTEN APPROVAL MUST BE OBTAINED FROM THE MCDPS INSPECTOR PRIOR TO PROCEEDING WITH WORK.
2. NO DISTURBED AREA SHALL BE LEFT UNSTABILIZED OVERNIGHT UNLESS THE RUNOFF IS DIRECTED TO A MCDPS-APPROVED SEDIMENT CONTROL DEVICE.
3. THE DEPOSITION OF ANY EARTH, GRAVEL, AND/OR OTHER MATERIAL OUTSIDE OF THE WORK AREA IS STRICTLY PROHIBITED. ALL SEDIMENT TRACKED ONTO PUBLIC RIGHT-OF-WAYS, OUTSIDE OF THE WORK AREA, MUST BE IMMEDIATELY REMOVED IF NOT DIVERTED TO A MCDPS-APPROVED SEDIMENT CONTROL DEVICE.
4. EROSION AND SEDIMENT CONTROL DEVICES AND/OR MEASURES ARE TO REMAIN IN PLACE UNTIL THEIR REMOVAL IS APPROVED IN WRITING BY THE MCDPS INSPECTOR. STABILIZE ANY DISTURBED AREAS RESULTING FROM REMOVAL OF THE SEDIMENT CONTROL DEVICES.
5. "DRY WEATHER FORECAST PER NOAA" SHALL BE CONSTRUED TO BE A FORECAST SHOWING A LIKELIHOOD OF PRECIPITATION AS BEING LESS THAN 20%.
6. AREAS OF SAME DAY STABILIZATION SHALL BE STABILIZED AS FOLLOWS: GRADED AGGREGATE BASE (OR PAVEMENT) FOR AREAS TO BE PAVED; SOIL STABILIZATION MATTING (SSM) FOR DITCHES WITHOUT BASEFLOW; AND SEED & MULCH FOR SOIL AREAS NOT IN DITCHES OR STREAMS.

SC-08 DETAILED SEQUENCE OF CONSTRUCTION

1. SET UP MAINTENANCE OF TRAFFIC (MOT) CONTROLS AS INDICATED ON THE MOT AND DETOUR PLANS.
2. INSTALL CURB INLET PROTECTION (CIP) THE EXISTING INLET AT THE NORTHEAST CORNER OF THE INTERSECTION OF DALE DRIVE AND MIDWOOD ROAD (I.E., THE INLET TO BE CONVERTED TO JUNCTION BOX JB-14-1) PRIOR TO CONSTRUCTING THE PATH IN THE DRAINAGE AREA TO THE INLET.
3. DURING A NOAA 3-DAY DRY WEATHER FORECAST, CONSTRUCT INLET I-14-2, MANHOLE MH-14-3 AND ASSOCIATED PIPING. CONTRACTOR SHALL ENSURE DRAINAGE CAN BE CONVEYED IN A NON-EROSIVE MANNER AT ALL TIMES DURING CONSTRUCTION.
4. FOLLOWING INSTALLATION OF STORM DRAIN PIPES AND STRUCTURES, INSTALL CIP ON INLET I-14-2.
5. WITH WRITTEN APPROVAL FROM THE MCDPS INSPECTOR, REMOVE CIP FROM THE EXISTING INLET AND CONVERT THE INLET TO JUNCTION BOX JB-14-1. CONSTRUCT THE PROPOSED CURB AS SHOWN ON THE PLANS TO CONVEY RUNOFF TO INLET I-14-2.
6. INLET PROTECTION AT INLET I-14-2 SHALL REMAIN IN PLACE UNTIL FINAL STABILIZATION HAS BEEN ACHIEVED AND WRITTEN APPROVAL IS RECEIVED FROM THE MCDPS INSPECTOR.

LEGEND:

LIMIT OF DISTURBANCE	LOD
PAVEMENT REMOVAL	
CONCRETE SIDEWALK	
ASPHALT PATH/DRIVEWAY/ROAD	
COMBINATION INLET PROTECTION	COIP
CURB INLET PROTECTION	CIP
STANDARD INLET PROTECTION	SIP

DRAFT
NOT FOR CONSTRUCTION

RJM ENGINEERING

NO.	REVISION	DATE	BY

MONTGOMERY COUNTY
DEPARTMENT OF TRANSPORTATION
GAITHERSBURG, MARYLAND

RECOMMENDED FOR APPROVAL

Chief, Design Section — Date

APPROVED

Chief, Division of Transportation Engineering — Date

Designed by: KJS Drawn by: LZ Checked by: DZ

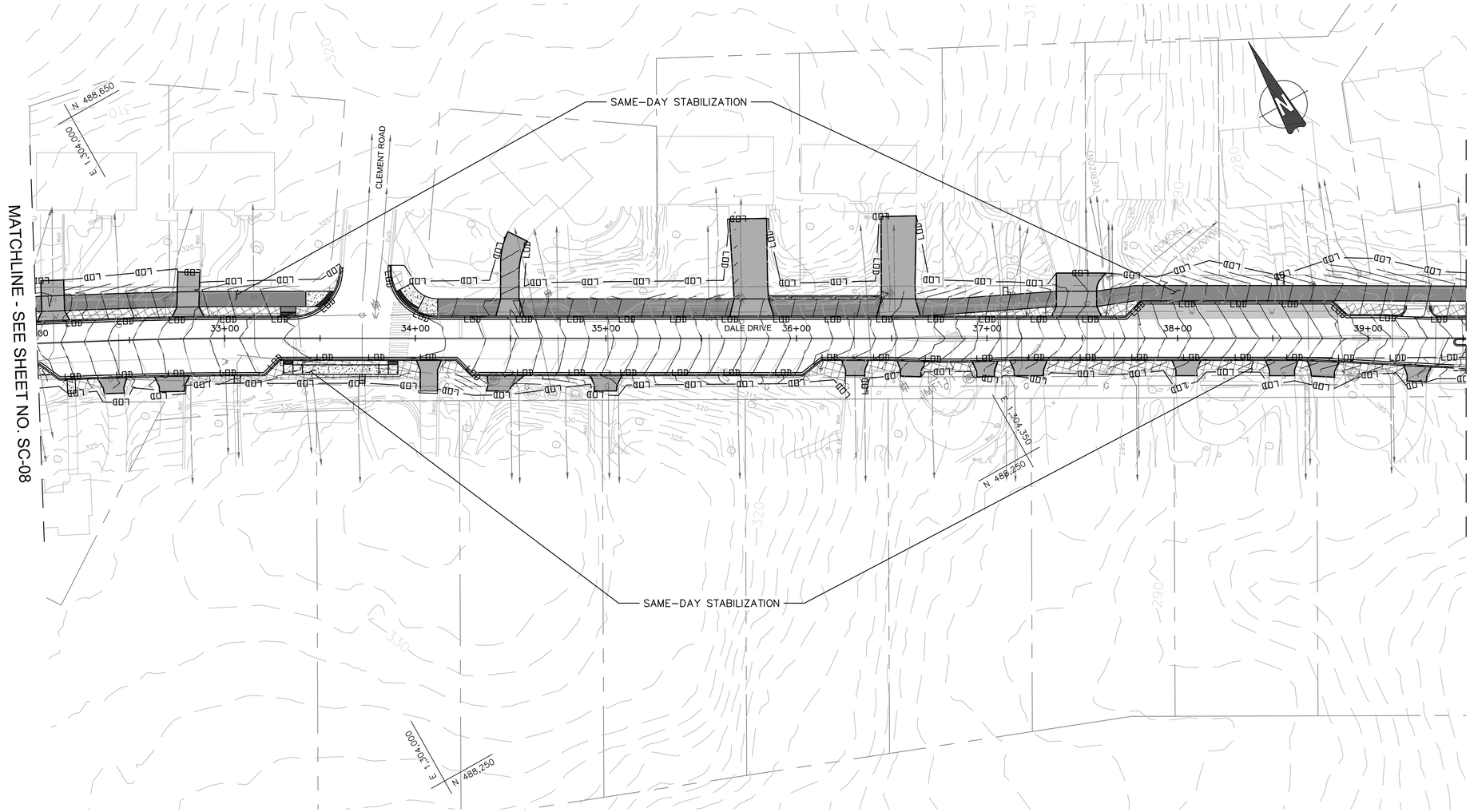
SC-08 PLAN SHEET
EROSION AND SEDIMENT CONTROL
DALE DRIVE SHARED USE PATH

0 30' 60'

SCALE: 1"=30' DATE: NOVEMBER 2022

CIP No. : 502109 SHEET 43 of 181

FILE NAME: P:\MoCo\Dale Drive Bike-Ped Path\00_Working\pES-P002-DaleDr.dwg LAYOUT NAME: SC-08 PLOTTED: Tuesday, November 22, 2022 - 2:33pm USER: kevin



GENERAL NOTES:

1. FOLLOWING THE INSTALLATION OF SEDIMENT CONTROLS, WRITTEN APPROVAL MUST BE OBTAINED FROM THE MCDPS INSPECTOR PRIOR TO PROCEEDING WITH WORK.
2. NO DISTURBED AREA SHALL BE LEFT UNSTABILIZED OVERNIGHT UNLESS THE RUNOFF IS DIRECTED TO A MCDPS-APPROVED SEDIMENT CONTROL DEVICE.
3. THE DEPOSITION OF ANY EARTH, GRAVEL, AND/OR OTHER MATERIAL OUTSIDE OF THE WORK AREA IS STRICTLY PROHIBITED. ALL SEDIMENT TRACKED ONTO PUBLIC RIGHT-OF-WAYS, OUTSIDE OF THE WORK AREA, MUST BE IMMEDIATELY REMOVED IF NOT DIVERTED TO A MCDPS-APPROVED SEDIMENT CONTROL DEVICE.
4. EROSION AND SEDIMENT CONTROL DEVICES AND/OR MEASURES ARE TO REMAIN IN PLACE UNTIL THEIR REMOVAL IS APPROVED IN WRITING BY THE MCDPS INSPECTOR. STABILIZE ANY DISTURBED AREAS RESULTING FROM REMOVAL OF THE SEDIMENT CONTROL DEVICES.
5. "DRY WEATHER FORECAST PER NOAA" SHALL BE CONSTRUED TO BE A FORECAST SHOWING A LIKELIHOOD OF PRECIPITATION AS BEING LESS THAN 20%.
6. AREAS OF SAME DAY STABILIZATION SHALL BE STABILIZED AS FOLLOWS: GRADED AGGREGATE BASE (OR PAVEMENT) FOR AREAS TO BE PAVED; SOIL STABILIZATION MATTING (SSM) FOR DITCHES WITHOUT BASEFLOW; AND SEED & MULCH FOR SOIL AREAS NOT IN DITCHES OR STREAMS.

LEGEND:

LIMIT OF DISTURBANCE	LOD
PAVEMENT REMOVAL	
CONCRETE SIDEWALK	
ASPHALT PATH/DRIVEWAY/ROAD	
COMBINATION INLET PROTECTION	COIP
CURB INLET PROTECTION	CIP
STANDARD INLET PROTECTION	SIP

DRAFT
NOT FOR CONSTRUCTION

RJM ENGINEERING

NO.	REVISION	DATE	BY

MONTGOMERY COUNTY
DEPARTMENT OF TRANSPORTATION
GAITHERSBURG, MARYLAND

RECOMMENDED FOR APPROVAL

Chief, Design Section — Date

APPROVED

Chief, Division of Transportation Engineering — Date

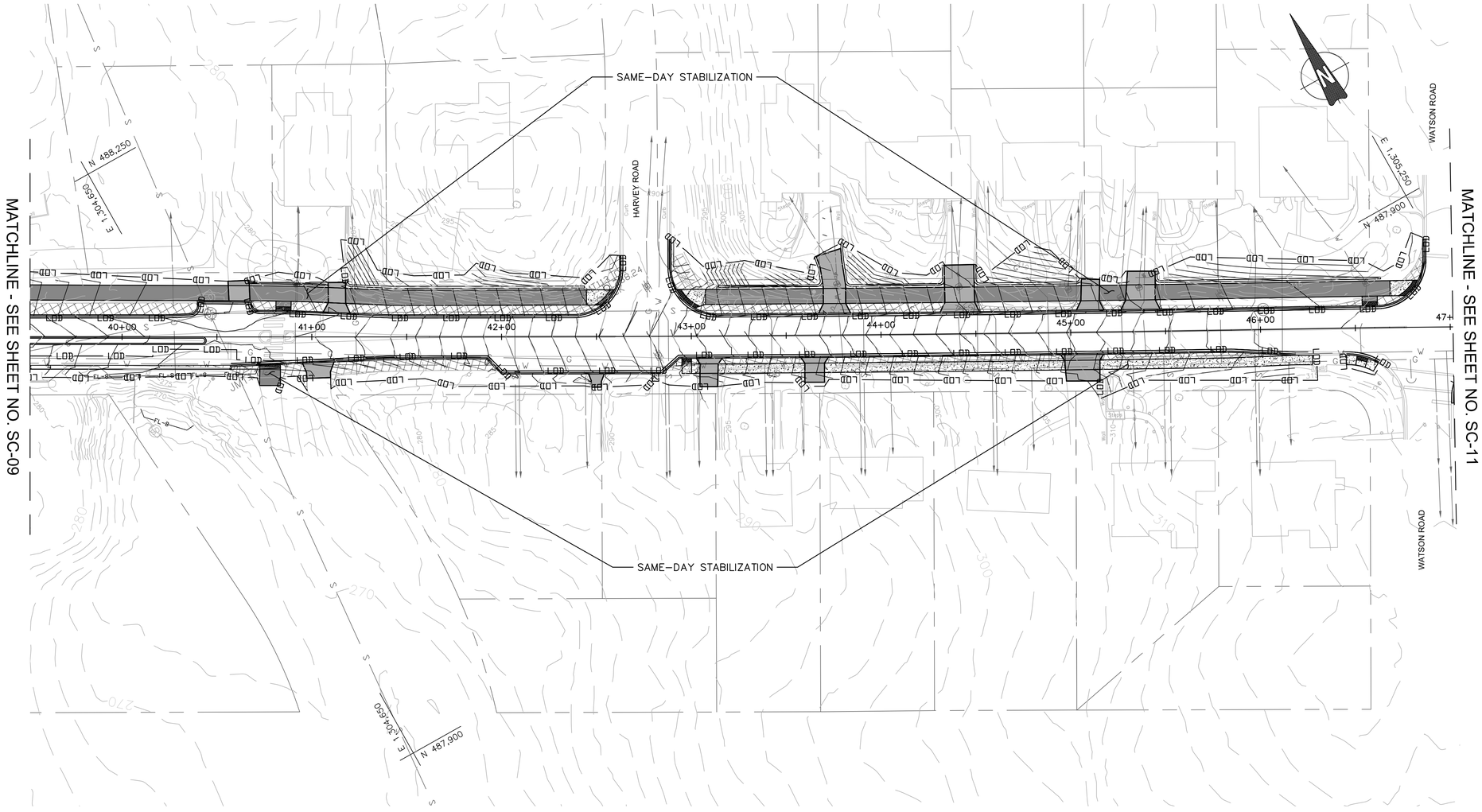
Designed by: KJS Drawn by: LZ Checked by: DZ

SC-09 PLAN SHEET
EROSION AND SEDIMENT CONTROL
DALE DRIVE SHARED USE PATH

0 30' 60'

SCALE: 1"=30' DATE: NOVEMBER 2022

CIP No. : 502109 SHEET 44 of 181



GENERAL NOTES:

1. FOLLOWING THE INSTALLATION OF SEDIMENT CONTROLS, WRITTEN APPROVAL MUST BE OBTAINED FROM THE MCDPS INSPECTOR PRIOR TO PROCEEDING WITH WORK.
2. NO DISTURBED AREA SHALL BE LEFT UNSTABILIZED OVERNIGHT UNLESS THE RUNOFF IS DIRECTED TO A MCDPS-APPROVED SEDIMENT CONTROL DEVICE.
3. THE DEPOSITION OF ANY EARTH, GRAVEL, AND/OR OTHER MATERIAL OUTSIDE OF THE WORK AREA IS STRICTLY PROHIBITED. ALL SEDIMENT TRACKED ONTO PUBLIC RIGHT-OF-WAYS, OUTSIDE OF THE WORK AREA, MUST BE IMMEDIATELY REMOVED IF NOT DIVERTED TO A MCDPS-APPROVED SEDIMENT CONTROL DEVICE.
4. EROSION AND SEDIMENT CONTROL DEVICES AND/OR MEASURES ARE TO REMAIN IN PLACE UNTIL THEIR REMOVAL IS APPROVED IN WRITING BY THE MCDPS INSPECTOR. STABILIZE ANY DISTURBED AREAS RESULTING FROM REMOVAL OF THE SEDIMENT CONTROL DEVICES.
5. "DRY WEATHER FORECAST PER NOAA" SHALL BE CONSTRUED TO BE A FORECAST SHOWING A LIKELIHOOD OF PRECIPITATION AS BEING LESS THAN 20%.
6. AREAS OF SAME DAY STABILIZATION SHALL BE STABILIZED AS FOLLOWS: GRADED AGGREGATE BASE (OR PAVEMENT) FOR AREAS TO BE PAVED; SOIL STABILIZATION MATTING (SSM) FOR DITCHES WITHOUT BASEFLOW; AND SEED & MULCH FOR SOIL AREAS NOT IN DITCHES OR STREAMS.

LEGEND:

LIMIT OF DISTURBANCE	LOD
PAVEMENT REMOVAL	
CONCRETE SIDEWALK	
ASPHALT PATH/DRIVEWAY/ROAD	
COMBINATION INLET PROTECTION	COIP
CURB INLET PROTECTION	CIP
STANDARD INLET PROTECTION	SIP

DRAFT
NOT FOR CONSTRUCTION

RJM ENGINEERING

NO.	REVISION	DATE	BY

MONTGOMERY COUNTY
DEPARTMENT OF TRANSPORTATION
GAITHERSBURG, MARYLAND

RECOMMENDED FOR APPROVAL

Chief, Design Section — Date

APPROVED

Chief, Division of Transportation Engineering — Date

Designed by: KJS Drawn by: LZ Checked by: DZ

SC-10 PLAN SHEET
EROSION AND SEDIMENT CONTROL
DALE DRIVE SHARED USE PATH

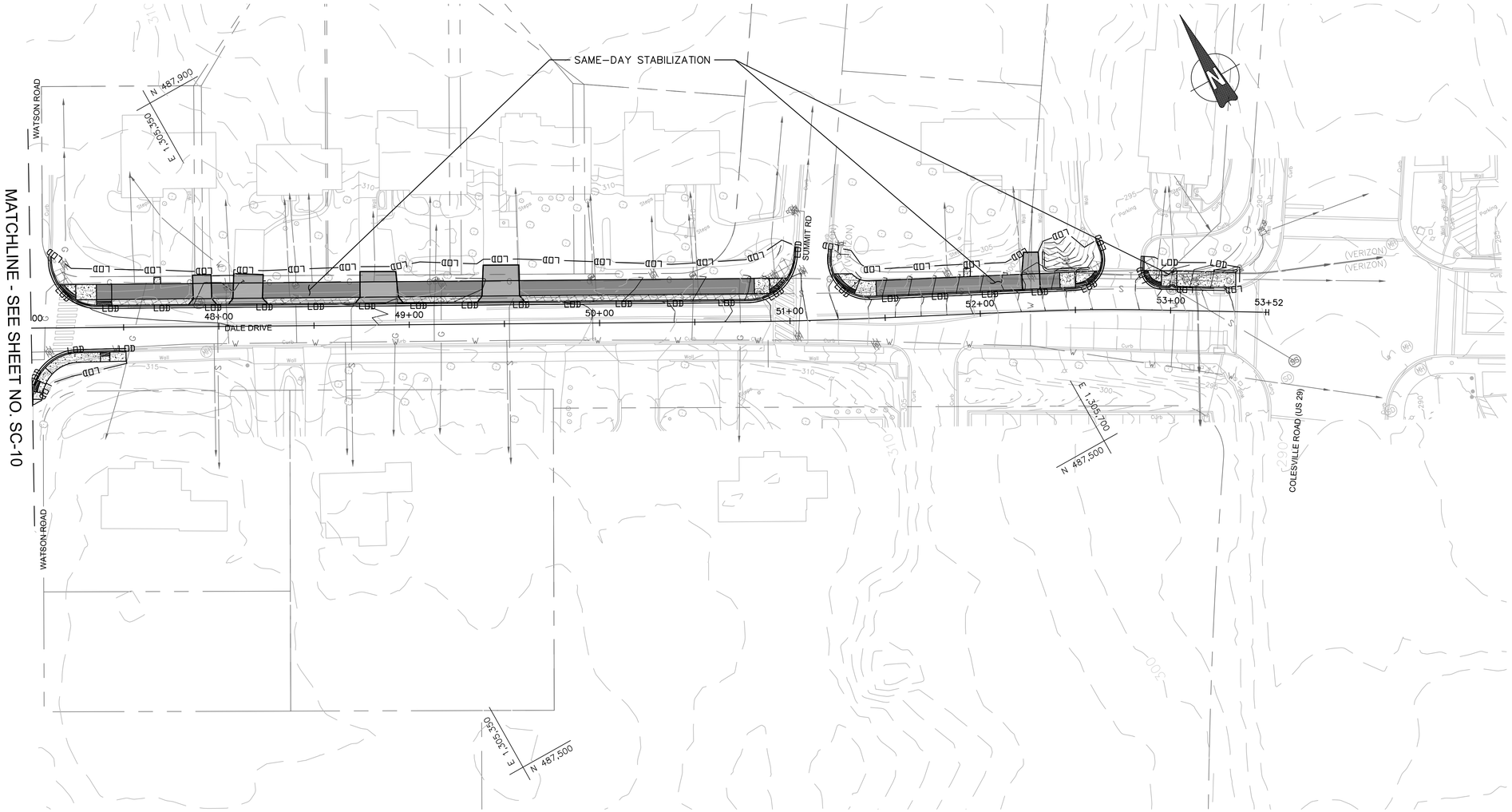
0 30' 60'

SCALE: 1"=30'

DATE: NOVEMBER 2022

CIP No. : 502109

SHEET 45 of 181



MATCHLINE - SEE SHEET NO. SC-10

GENERAL NOTES:

1. FOLLOWING THE INSTALLATION OF SEDIMENT CONTROLS, WRITTEN APPROVAL MUST BE OBTAINED FROM THE MCDPS INSPECTOR PRIOR TO PROCEEDING WITH WORK.
2. NO DISTURBED AREA SHALL BE LEFT UNSTABILIZED OVERNIGHT UNLESS THE RUNOFF IS DIRECTED TO A MCDPS-APPROVED SEDIMENT CONTROL DEVICE.
3. THE DEPOSITION OF ANY EARTH, GRAVEL, AND/OR OTHER MATERIAL OUTSIDE OF THE WORK AREA IS STRICTLY PROHIBITED. ALL SEDIMENT TRACKED ONTO PUBLIC RIGHT-OF-WAYS, OUTSIDE OF THE WORK AREA, MUST BE IMMEDIATELY REMOVED IF NOT DIVERTED TO A MCDPS-APPROVED SEDIMENT CONTROL DEVICE.
4. EROSION AND SEDIMENT CONTROL DEVICES AND/OR MEASURES ARE TO REMAIN IN PLACE UNTIL THEIR REMOVAL IS APPROVED IN WRITING BY THE MCDPS INSPECTOR. STABILIZE ANY DISTURBED AREAS RESULTING FROM REMOVAL OF THE SEDIMENT CONTROL DEVICES.
5. "DRY WEATHER FORECAST PER NOAA" SHALL BE CONSTRUED TO BE A FORECAST SHOWING A LIKELIHOOD OF PRECIPITATION AS BEING LESS THAN 20%.
6. AREAS OF SAME DAY STABILIZATION SHALL BE STABILIZED AS FOLLOWS: GRADED AGGREGATE BASE (OR PAVEMENT) FOR AREAS TO BE PAVED; SOIL STABILIZATION MATTING (SSM) FOR DITCHES WITHOUT BASEFLOW; AND SEED & MULCH FOR SOIL AREAS NOT IN DITCHES OR STREAMS.

LEGEND:

LIMIT OF DISTURBANCE	LOD
PAVEMENT REMOVAL	
CONCRETE SIDEWALK	
ASPHALT PATH/DRIVEWAY/ROAD	
COMBINATION INLET PROTECTION	COIP
CURB INLET PROTECTION	CIP
STANDARD INLET PROTECTION	SIP

DRAFT
NOT FOR CONSTRUCTION

RJM ENGINEERING

NO.	REVISION	DATE	BY

MONTGOMERY COUNTY
DEPARTMENT OF TRANSPORTATION
GAITHERSBURG, MARYLAND

RECOMMENDED FOR APPROVAL

Chief, Design Section — Date

APPROVED

Chief, Division of Transportation Engineering — Date

Designed by: KJS Drawn by: LZ Checked by: DZ

SC-11 PLAN SHEET
EROSION AND SEDIMENT CONTROL
DALE DRIVE SHARED USE PATH

0 30' 60'

SCALE: 1"=30'

DATE: NOVEMBER 2022

CIP No. : 502109

SHEET 46 of 181

FILE NAME: P:\MoCo\Dale Drive Bike-Ped Path\00_Working\pES-P002-DaleDr.dwg LAYOUT NAME: SC-11 PLOTTED: Tuesday, November 22, 2022 - 2:34pm USER: kevin

MAINTENANCE OF TRAFFIC – GENERAL NOTES

1. ALL WORK SHALL BE PERFORMED IN ACCORDANCE WITH THE MONTGOMERY COUNTY DEPARTMENT OF TRANSPORTATION'S "WORK ZONE TEMPORARY TRAFFIC CONTROL STANDARDS" – JULY 2014, GENERAL NOTES AND STANDARDS PROVIDED IN CATEGORY "1" OF THE MDOT SHA BOOK OF STANDARDS, THE MARYLAND MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES (MD MUTCD) AND SUBSEQUENT REVISIONS ADOPTED BY THE STATE OF MARYLAND, AND THESE PLANS.
2. THE CONTRACTOR SHALL FURNISH, INSTALL, AND MAINTAIN TRAFFIC CONTROL SIGNS AND DEVICES. THE CONTRACTOR SHALL MAINTAIN TRAFFIC DURING HOURS OF CONSTRUCTION IN ACCORDANCE WITH THE METHOD OF TRAFFIC CONTROL SHOWN ON THESE DRAWINGS, OTHER CONTRACT DOCUMENTS, AND THE 2011 MD MUTCD AND SUBSEQUENT REVISIONS.
3. THE CONTRACTOR SHALL COORDINATE TEMPORARY TRAFFIC CONTROL WITH ADJACENT PROJECTS AS NECESSARY.
4. THE CONTRACTOR SHALL NOTIFY ALL TRANSIT AGENCIES WITH ROUTES IMPACTED BY MOT OPERATIONS AND PROVIDE ANTICIPATED IMPACT DURATION PRIOR TO THE START OF CONSTRUCTION ACTIVITIES. THE CONTRACTOR SHALL MAINTAIN ANY TEMPORARY BUS STOPS.
5. LONGITUDINAL DISTANCES OF ALL ADVANCED WARNING SIGNS MAY BE ADJUSTED DUE TO INTERSECTING STREETS, DRIVEWAYS, AND/OR FIELD CONDITIONS AS APPROVED BY THE ENGINEER. WHERE ADVANCE SIGNING CONFLICTS WITH TEMPORARY SIGNING FOR LANE CLOSURES, LANE SHIFTS, OR FLAGGING OPERATIONS, ADJUSTMENTS TO ADVANCE SIGNING SHALL BE MADE PER THE ENGINEER TO AVOID CONFUSING AND/OR CONFLICTING MESSAGES.
6. ALL TEMPORARY SIGNS SHALL BE PLACED SO THAT THEY DO NOT OBSTRUCT EXISTING TRAFFIC CONTROL DEVICES.
7. NO WORK IS TO BEGIN UNTIL ALL ADVANCE WARNING SIGNS, DRUMS, BARRIERS, AND TEMPORARY PAVEMENT MARKINGS ARE IN PLACE AND OPERATIONAL.
8. EXISTING SIGNS THAT CONFLICT WITH TEMPORARY TRAFFIC PATTERNS SHALL BE REMOVED OR COVERED. PERMANENT SIGNS THAT ARE REMOVED (OR COVERED) DURING CONSTRUCTION SHALL BE REINSTALLED PRIOR TO RETURNING THE ROAD TO PRE-CONSTRUCTION TRAFFIC PATTERNS.
9. WHERE TEMPORARY PAVEMENT MARKINGS ARE REQUIRED, EXISTING PAVEMENT MARKINGS SHALL BE REMOVED BY GRINDING WHEN WITHIN THE FINAL LIMITS OF PAVING, OR COVERED WITH BLACKOUT TAPE WHEN OUTSIDE THE FINAL LIMITS OF PAVING, AS SHOWN ON THE MOT PLANS.
10. ALL EXISTING SIGNS AND PAVEMENT MARKINGS SHALL BE MAINTAINED THROUGHOUT THE DURATION OF CONSTRUCTION UNLESS A CHANGE IS SHOWN ON THE PLANS AND/OR IS DIRECTED BY THE ENGINEER.
11. EXCAVATIONS SHALL BE BACKFILLED WITH GRADED AGGREGATE BASE PRIOR TO THE END OF THE WORK DAY IN CONFORMANCE WITH MONTGOMERY COUNTY'S TEMPORARY TRAFFIC CONTROL REQUIREMENTS.
12. PEDESTRIAN FACILITIES MUST BE MAINTAINED, OR A CLEAR, DETECTABLE, TRAVERSABLE, SAFE, AND ADA-ACCESSIBLE ALTERNATE PATH MUST BE PROVIDED AT ALL TIMES DURING CONSTRUCTION AND AFTER HOURS. PEDESTRIAN DETOURS SHALL BE PROVIDED UTILIZING THE APPLICABLE STANDARD DETAIL (MD 104.06-09A THROUGH MD 104.06-09D) BASED ON THE ACTIVE WORK ZONE. STANDARD DETAILS PROVIDED ON SHEET 50.
13. WHERE A SIDEWALK IS CLOSED DURING CONSTRUCTION, THE CONTRACTOR SHALL INSTALL A BARRIER ACROSS THE FULL WIDTH OF THE SIDEWALK APPROACHING THE CLOSURE. THIS BARRIER SHOULD BE DETECTABLE BY A VISUALLY IMPAIRED INDIVIDUAL TRAVELING WITH THE AID OF A CANE.
14. RADIO COMMUNICATION IS REQUIRED BETWEEN FLAGGERS AT THE DISCRETION OF THE MONTGOMERY COUNTY INSPECTOR, OR IF THE FLAGGERS CANNOT SEE EACH OTHER, AND/OR THE LANE CLOSURE EXCEEDS 200 FEET.
15. THE CONTRACTOR SHALL NOTIFY MONTGOMERY COUNTY TRANSPORTATION MANAGEMENT CENTER AT 240-777-2100 AT LEAST 72 HOURS PRIOR TO STARTING ALL WORK.
16. IF ACCESS TO ANY PROPERTY MUST BE CLOSED DUE TO CONSTRUCTION, THE CONTRACTOR SHALL CONTACT THE PROPERTY OWNERS TO COORDINATE ANY CLOSURE OR ACCESS RESTRICTIONS AT LEAST 72 HOURS PRIOR TO THE IMPLEMENTATION OF THOSE RESTRICTIONS.
17. WHEN DRIVEWAYS ARE IMPACTED BY THE WORK ZONE, THE CONTRACTOR SHALL COORDINATE WITH THE AFFECTED PROPERTY OWNERS. WHERE TWO ENTRANCES EXIST FOR ONE PROPERTY, CONSTRUCTION SHALL BE SEQUENCED SO THAT ONLY ONE ENTRANCE WILL BE DISTURBED AT ANY GIVEN TIME. ACCESS TO DRIVEWAYS AND SIDE STREETS MUST BE MAINTAINED AT ALL TIMES UNLESS CLOSURES ARE PERMITTED BY THE PROPERTY OWNER OR A DETOUR PLAN IS PROVIDED.
18. EMERGENCY ACCESS MUST BE MAINTAINED AT ALL TIMES TO ALL PROPERTIES. ADEQUATE STOPPING SIGHT DISTANCE MUST BE MAINTAINED AT ALL TIMES FOR ALL ACCESS POINTS.
19. ONCE ALL PHASES ARE COMPLETE, FINAL PAVEMENT MARKINGS AND SIGNING SHALL MATCH THE SIGNING AND PAVEMENT MARKING PLANS.
20. IN THE AREAS TO BE CONSTRUCTED WITH FLAGGING OPERATIONS OR TEMPORARY LANE CLOSURES, THE CONTRACTOR SHALL ONLY DISTURB AS MUCH OF THE ROADWAY AS CAN BE RECONSTRUCTED BY THE END OF EACH WORK DAY TO ALLOW ALL LANES TO BE OPEN TO TRAFFIC.
21. ADVANCE NOTICE OF ROADWAY CLOSURES SHALL BE PROVIDED TWO WEEKS PRIOR TO THE CLOSURE TAKING EFFECT. NOTICE OF THE ANTICIPATED DATE THE ROADWAY WILL REOPEN SHALL BE PROVIDED NO MORE THAN TWO DAYS AFTER THE ACTUAL DATE OF THE ROAD CLOSURE.
22. CONTRACTOR SHALL CONSTRUCT TEMPORARY WEDGE AND LEVEL AT RESIDENTIAL DRIVEWAYS TO MAINTAIN ACCESS DURING CONSTRUCTION AS NEEDED

SEQUENCE OF CONSTRUCTION

THE SEQUENCE OF CONSTRUCTION FOR EACH PHASE OF WORK IS DETAILED BELOW. CONSTRUCTION PHASES ARE SPECIFIC TO A CERTAIN WORK ZONE. PHASES MAY BE CONSTRUCTED IN A DIFFERENT ORDER THAN OUTLINED BLOW, BUT THE SEQUENCE OF CONSTRUCTION WITHIN EACH PHASE MUST BE MAINTAINED UNLESS MODIFICATIONS ARE APPROVED BY THE ENGINEER.

PHASE 1: SHARED-USE PATH CONSTRUCTION & CURB/GUTTER WORK ON WESTBOUND DALE DR/COLUMBIA BLVD

1. WORK BETWEEN INTERSECTIONS SHALL BE PERFORMED USING FLAGGING CONTROLS, NON-INTERSECTION (STANDARD TCP-102.02).
2. WORK AT 4-LEG INTERSECTIONS SHALL BE PERFORMED USING FLAGGING CONTROLS, 3-LEG INTERSECTION (STANDARD TCP-105.01 AND TCP-105.02).
3. WORK AT 3-LEG INTERSECTIONS SHALL BE PERFORMED USING FLAGGING CONTROLS, 3-LEG INTERSECTION (STANDARD TCP-105.03 THROUGH TCP-105.07).

PHASE 2: CURB/GUTTER WORK ON EASTBOUND DALE DR/COLUMBIA BLVD

1. WORK BETWEEN INTERSECTIONS SHALL BE PERFORMED USING FLAGGING CONTROLS, NON-INTERSECTION (STANDARD TCP-102.02).
2. WORK AT 4-LEG INTERSECTIONS SHALL BE PERFORMED USING FLAGGING CONTROLS, 3-LEG INTERSECTION (STANDARD TCP-105.01 AND TCP-105.02).
3. WORK AT 3-LEG INTERSECTIONS SHALL BE PERFORMED USING FLAGGING CONTROLS, 3-LEG INTERSECTION (STANDARD TCP-105.03 THROUGH TCP-105.07).

PHASE 3: DETOUR – COLUMBIA BLVD/WOODLAND DR

1. SET UP PVMS TWO (2) WEEKS PRIOR TO ROAD CLOSURE.
2. SET UP DETOUR SIGNS FOR ROAD CLOSURE.
3. DETOUR TRAFFIC ONTO DETOUR ROUTE AND CLOSE THE ROADWAY AS INDICATED ON THE PLANS.
4. UPON COMPLETION OF THE INTERSECTION WORK, REMOVE DETOUR SIGNS.

PHASE 4: DETOUR – LUZERNE AVE/WOODLAND DR

1. SET UP DETOUR SIGNS FOR ROAD CLOSURE.
2. DETOUR TRAFFIC ONTO DETOUR ROUTE AND CLOSE THE ROADWAY AS INDICATED ON THE PLANS.
3. UPON COMPLETION OF THE INTERSECTION WORK, REMOVE DETOUR SIGNS.

PHASE 5: DETOUR – GRACE CHURCH RD

1. SET UP PVMS TWO (2) WEEKS PRIOR TO ROAD CLOSURE.
2. SET UP DETOUR SIGNS FOR ROAD CLOSURE.
3. DETOUR TRAFFIC ONTO DETOUR ROUTE AND CLOSE THE ROADWAY AS INDICATED ON THE PLANS.
4. UPON COMPLETION OF THE INTERSECTION WORK, REMOVE DETOUR SIGNS.

PHASE 6: DETOUR – DALE DRIVE

1. SET UP PVMS TWO (2) WEEKS PRIOR TO ROAD CLOSURE.
2. SET UP DETOUR SIGNS FOR ROAD CLOSURE.
3. DETOUR TRAFFIC ONTO DETOUR ROUTE AND CLOSE THE ROADWAY AS INDICATED ON THE PLANS.
4. UPON COMPLETION OF THE WORK CROSSING THE ROADWAY (I.E., INSTALLATION OF THE PROPOSED STORM DRAIN UNDER DALE DRIVE AND CONNECTING INLETS), REMOVE DETOUR SIGNS.
5. THE CONSTRUCTION OF THE REMAINING DRAINAGE STRUCTURES AND PIPING ALONG DALE DRIVE SHALL BE PERFORMED USING FLAGGING OPERATIONS (REFER TO PHASE 1 AND 2 OF THE SEQUENCE OF CONSTRUCTION, THIS SHEET).

PHASE 7: ROADWAY MILLING/RESURFACING

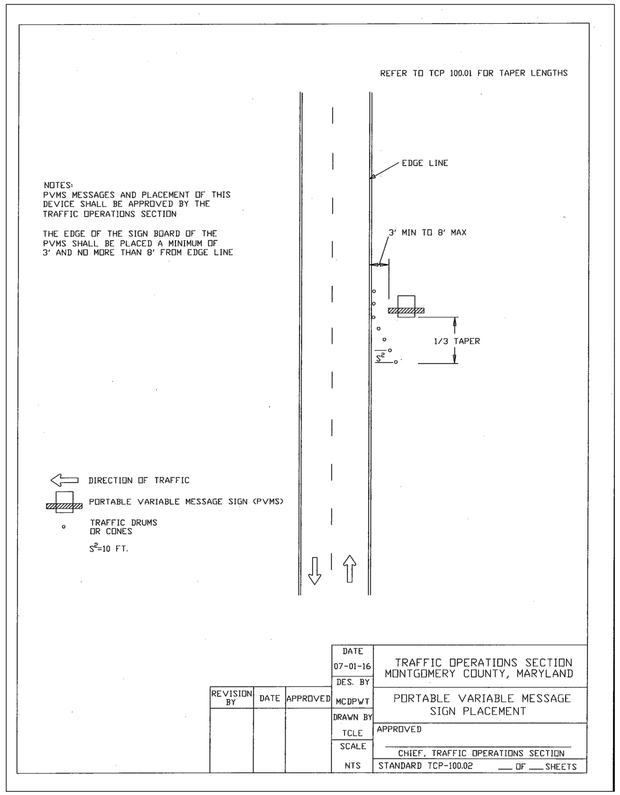
LIMITS PER WORK DAY/NIGHT WILL VARY AS TO THE LENGTH OF WORK WHICH CAN BE MILLED/RESURFACED WITHIN THE WORK DAY. MILLED SURFACE SHALL NOT BE EXPOSED TO TRAFFIC UNLESS APPROVED BY THE ENGINEER.

1. UTILIZE MARYLAND TRAFFIC CONTROL MDOT SHA STANDARD MD STD. 104.02-10.
2. INSTALL ADVANCE WARNING AND INFORMATION SIGNS.
3. INSTALL TRAFFIC CONTROL DEVICES.
4. PERFORM PAVEMENT MILLING/RESURFACING OPERATIONS WITHIN THE PROJECT LIMITS AS DETAILED ON THE ROADWAY PLANS. INSTALL TEMPORARY PAVEMENT MARKINGS AS REQUIRED.
5. INSTALL FINAL PAVEMENT MARKINGS AS SHOWN ON THE SIGNING AND PAVEMENT MARKING PLANS.

PVMS DISPLAY DETAIL

ROAD CLOSURE TO BEGIN	DISPLAY 1
ON OR ABOUT XX/XX/XX	DISPLAY 2

1. TWO WEEKS PRIOR TO THE START OF CONSTRUCTION, THE PROPOSED PORTABLE VARIABLE MESSAGE SIGNS (PVMS) SHALL BE PLACED IN ACCORDANCE WITH STANDARD TCP-100.02.
2. FINAL VARIABLE SIGN(S) MESSAGES SHALL BE DETERMINED BY THE MCDOT DIVISION OF TRAFFIC ENGINEERING AND OPERATIONS ENGINEER.



DRAFT
NOT FOR CONSTRUCTION

RJM ENGINEERING

NO.	REVISION	DATE	BY

MONTGOMERY COUNTY
DEPARTMENT OF TRANSPORTATION
GAITHERSBURG, MARYLAND

RECOMMENDED FOR APPROVAL

Chief, Design Section — Date

APPROVED

Chief, Division of Transportation Engineering — Date

Designed by: NT Drawn by: KJS Checked by: DZ

MT-01 MAINTENANCE OF TRAFFIC MOT NOTES

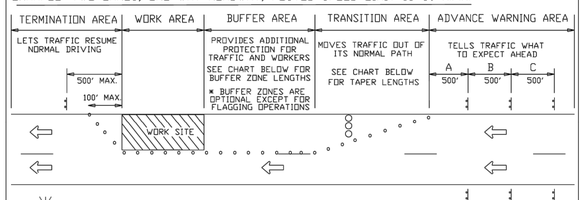
DALE DRIVE SHARED USE PATH

SCALE: NOT TO SCALE DATE: NOVEMBER 2022

CIP No. : 502109 SHEET 47 of 181

SPEED M.P.H.	MINIMUM DISTANCE FROM TAPER TO FIRST SIGN	ADDITIONAL SIGNS IN SERIES TO BE SPACED AT A MINIMUM			MINIMUM COMBINED ADVANCED WARNING
	A	B	C	D	
25	200′	200′	200′		600′
30-35	300′	300′	300′		900′
40	500′	500′	500′		1500′
45-65	800′	700′	1100′	2600′ (OPTIONAL)	2600′

EXAMPLE: TWO LANES, ONE-WAY ROADWAY, POSTED SPEED LIMIT IS 30 M.P.H.



✳ NOTE: THE POSTED SPEED PLUS 10 MPH SHOULD BE USED FOR THE DESIGN OF SIGN SPACING, TAPER AND BUFFER LENGTHS

GUIDELINES FOR TAPER LENGTHS

✳ SPEED M.P.H.	TAPER LENGTH LANE WIDTH IN FEET 10	11	12	NUMBER OF SPACING OF DEVICES FOR TAPER	SPACING OF DEVICES ALONG TAPER IN FEET
20	70	75	80	5	20
25	105	115	125	6	25
30	150	165	180	7	30
35	205	225	245	8	35
40	270	295	320	9	40
45	450	495	540	13	45
50	500	550	600	13	50
55	550	605	660	13	55
60	600	660	720	13	60
65	650	715	780	13	65

GUIDELINES FOR BUFFER ZONE LENGTHS

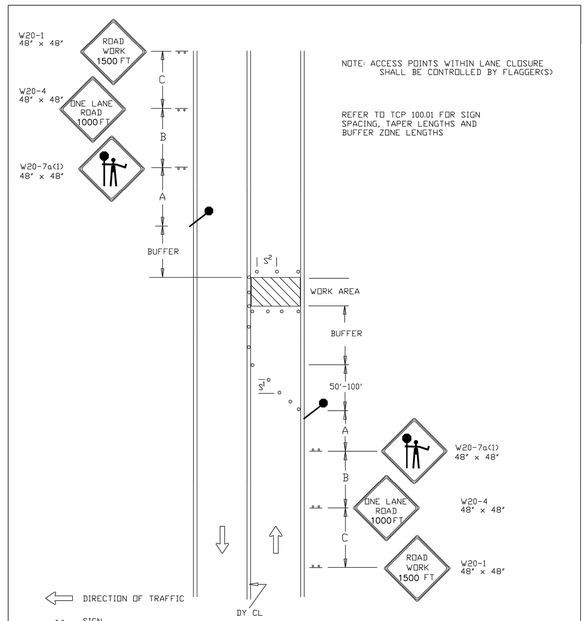
SPEED (MPH)	LENGTH (FEET)
20	35
25	55
30	85
35	120
40	170
45	220
50	280
55	335
60	415
65	485

REVISION BY	DATE	APPROVAL

DATE	07-01-16
DES. BY	MCDPWT
DRAWN BY	
TCLE	APPROVED
SCALE	CHIEF, TRAFFIC OPERATIONS SECTION
NTS	STANDARD TCP-100.01 ___ OF ___ SHEETS

TRAFFIC OPERATIONS SECTION
MONTGOMERY COUNTY, MARYLAND

SPACING CHART

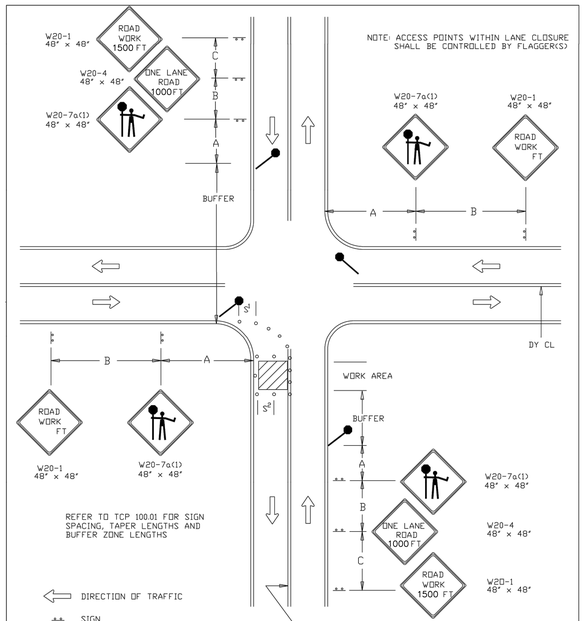


REVISION BY	DATE	APPROVED

DATE	07-01-16
DES. BY	MCDPWT
DRAWN BY	
TCLE	APPROVED
SCALE	CHIEF, TRAFFIC OPERATIONS SECTION
NTS	STANDARD TCP-102.02 ___ OF ___ SHEETS

TRAFFIC OPERATIONS SECTION
MONTGOMERY COUNTY, MARYLAND

FLAGGING CONTROL
NON - INTERSECTION

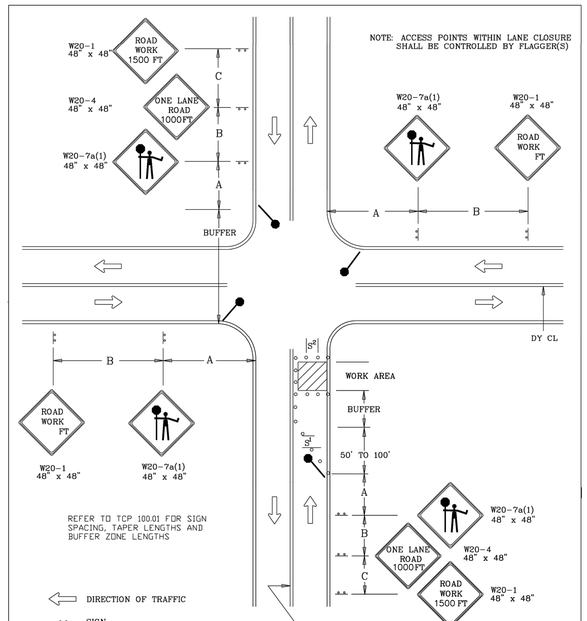


REVISION BY	DATE	APPROVED

DATE	07-01-16
DES. BY	MCDPWT
DRAWN BY	
TCLE	APPROVED
SCALE	CHIEF, TRAFFIC OPERATIONS SECTION
NTS	STANDARD TCP-105.01 ___ OF ___ SHEETS

TRAFFIC OPERATIONS SECTION
MONTGOMERY COUNTY, MARYLAND

FLAGGING CONTROL
AT 4 - LEG INTERSECTION (1)

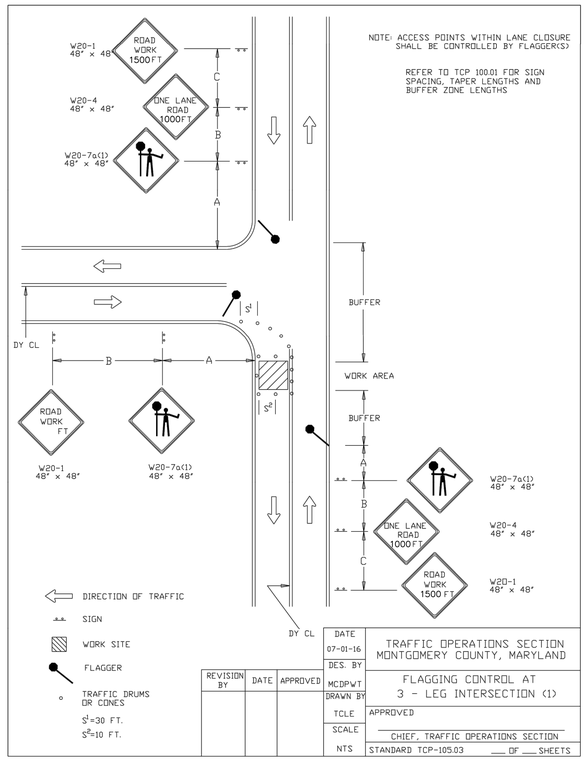


REVISION BY	DATE	APPROVED

DATE	07-01-16
DES. BY	MCDPWT
DRAWN BY	
TCLE	APPROVED
SCALE	CHIEF, TRAFFIC OPERATIONS SECTION
NTS	STANDARD TCP-105.02 ___ OF ___ SHEETS

TRAFFIC OPERATIONS SECTION
MONTGOMERY COUNTY, MARYLAND

FLAGGING CONTROL
AT 4 - LEG INTERSECTION (2)



REVISION BY	DATE	APPROVED

DATE	07-01-16
DES. BY	MCDPWT
DRAWN BY	
TCLE	APPROVED
SCALE	CHIEF, TRAFFIC OPERATIONS SECTION
NTS	STANDARD TCP-105.03 ___ OF ___ SHEETS

TRAFFIC OPERATIONS SECTION
MONTGOMERY COUNTY, MARYLAND

FLAGGING CONTROL AT
3 - LEG INTERSECTION (1)

DALE DRIVE
A = 500'
B = 500'
C = 500'

GRACE CHURCH RD & COLUMBIA BLVD
A = 300'
B = 300'
C = 300'

DRAFT
NOT FOR CONSTRUCTION

RJM ENGINEERING

NO.	REVISION	DATE	BY

MONTGOMERY COUNTY
DEPARTMENT OF TRANSPORTATION
GAITHERSBURG, MARYLAND

RECOMMENDED FOR APPROVAL

Chief, Design Section — Date

APPROVED

Chief, Division of Transportation Engineering — Date

Designed by: KJS Drawn by: LZ Checked by: DZ

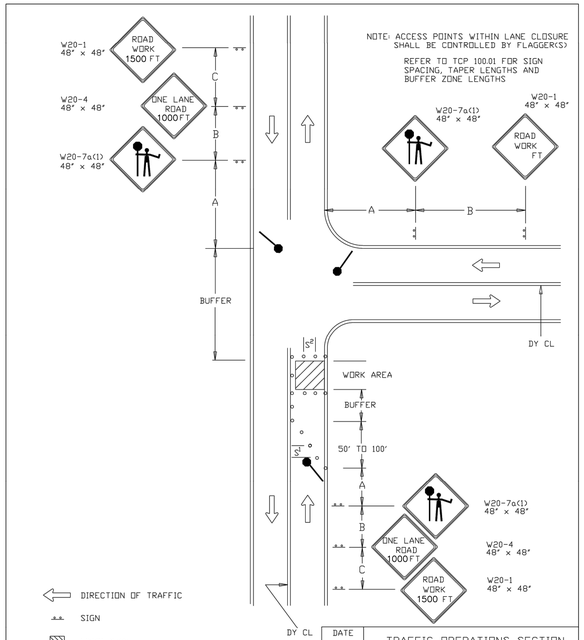
MT-02 MAINTENANCE OF TRAFFIC MOT DETAILS

DALE DRIVE SHARED USE PATH

SCALE: NOT TO SCALE DATE: NOVEMBER 2022

CIP No. : 502109 SHEET 48 of 181

FILE NAME: P:\MoCo\Dale Drive Bike-Ped Path\00_Working\pMT-P001-DaleDr.dwg LAYOUT NAME: MT-02 MOT Details PLOTTED: Tuesday, November 22, 2022 - 2:34pm USER: kevin

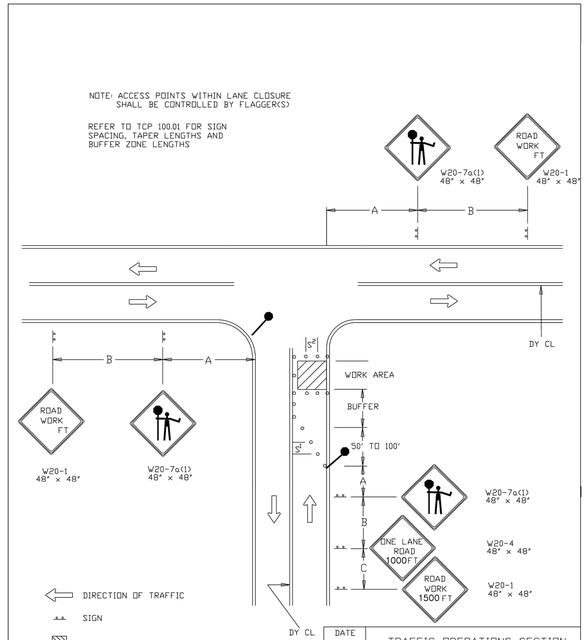


REVISION BY	DATE	APPROVED

DATE	07-01-16
DES. BY	MCDPWT
DRAWN BY	
TCLE	APPROVED
SCALE	CHIEF, TRAFFIC OPERATIONS SECTION
NTS	STANDARD TCP-105.04 ___ OF ___ SHEETS

TRAFFIC OPERATIONS SECTION
MONTGOMERY COUNTY, MARYLAND

FLAGGING CONTROL AT
3 - LEG INTERSECTION (2)

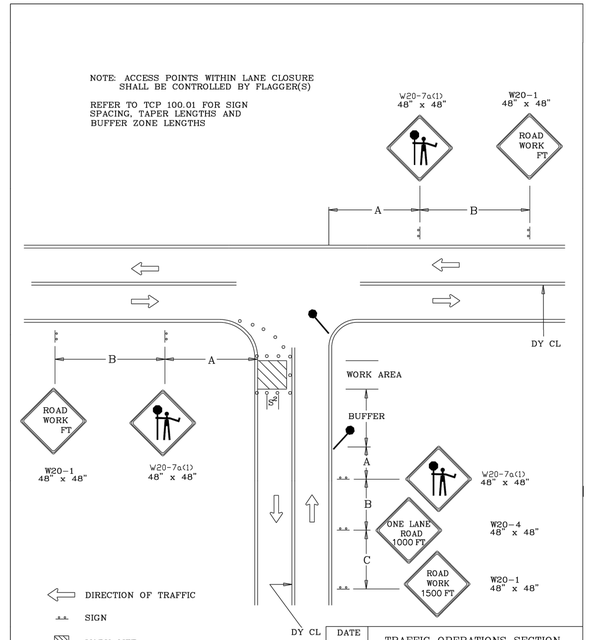


REVISION BY	DATE	APPROVED

DATE	07-01-16
DES. BY	MCDPWT
DRAWN BY	
TCLE	APPROVED
SCALE	CHIEF, TRAFFIC OPERATIONS SECTION
NTS	STANDARD TCP-105.05 ___ OF ___ SHEETS

TRAFFIC OPERATIONS SECTION
MONTGOMERY COUNTY, MARYLAND

FLAGGING CONTROL AT
3 - LEG INTERSECTION (3)

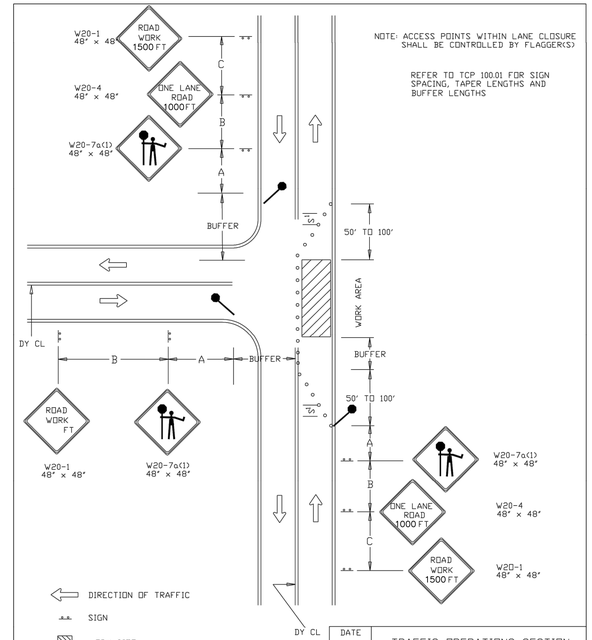


REVISION BY	DATE	APPROVED

DATE	07-01-16
DES. BY	MCDPWT
DRAWN BY	
TCLE	APPROVED
SCALE	CHIEF, TRAFFIC OPERATIONS SECTION
NTS	STANDARD TCP-105.06 ___ OF ___ SHEETS

TRAFFIC OPERATIONS SECTION
MONTGOMERY COUNTY, MARYLAND

FLAGGING CONTROL AT
3 - LEG INTERSECTION (4)



REVISION BY	DATE	APPROVED

DATE	07-01-16
DES. BY	MCDPWT
DRAWN BY	
TCLE	APPROVED
SCALE	CHIEF, TRAFFIC OPERATIONS SECTION
NTS	STANDARD TCP-105.07 ___ OF ___ SHEETS

TRAFFIC OPERATIONS SECTION
MONTGOMERY COUNTY, MARYLAND

FLAGGING CONTROL AT
3 - LEG INTERSECTION
FAR - SIDE CLOSURE

DALE DRIVE:
A = 500'
B = 500'
C = 500'

GRACE CHURCH RD & COLUMBIA BLVD
A = 300'
B = 300'
C = 300'

DRAFT
NOT FOR CONSTRUCTION

RJM ENGINEERING

NO.	REVISION	DATE	BY

MONTGOMERY COUNTY
DEPARTMENT OF TRANSPORTATION
GAITHERSBURG, MARYLAND

RECOMMENDED FOR APPROVAL

Chief, Design Section — Date

APPROVED

Chief, Division of Transportation Engineering — Date

Designed by: KJS Drawn by: LZ Checked by: DZ

MT-03 MAINTENANCE OF TRAFFIC MOT DETAILS

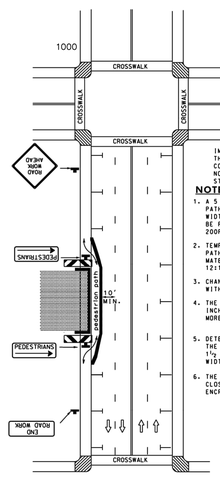
DALE DRIVE SHARED USE PATH

SCALE: NOT TO SCALE DATE: NOVEMBER 2022

CIP No. : 502109 SHEET 49 of 181

FILE NAME: P:\MoCo\Dale Drive Bike-Ped Path\00_Working\pMT-P001-DaleDr.dwg LAYOUT NAME: MT-03 MOT Details (2) PLOTTED: Tuesday, November 22, 2022 - 2:34pm USER: kevin

TEMPORARY TRAFFIC CONTROL TYPICAL APPLICATION FOR SIDEWALK CLOSURE ALTERNATE PEDESTRIAN ROUTE USING ROADWAY LANE OR SHOULDER



IMPORTANT:
THIS DRAWING SHALL BE USED IN COMBINATION WITH THE GENERAL NOTES MD 104.00-01 THROUGH MD 104.00-18 AND STANDARD DETAILS MD 104.01-01 THROUGH MD 104.01-81

NOTES

1. A 5 FOOT MINIMUM WIDTH PEDESTRIAN PATH / ALTERNATE PEDESTRIAN PATH SHALL BE MAINTAINED WHERE POSSIBLE. WHERE A 5 FOOT MIN WIDTH CANNOT BE ACHIEVED. A MINIMUM WIDTH OF 36 INCHES SHALL BE PROVIDED WITH PASSING ZONES (60 IN X 60 IN) AT LEAST EVERY 200FT.
2. TEMPORARY RAMPS SHALL HAVE A SLOPE OF 12:1 MAX. THE PEDESTRIAN PATH AND RAMP SHALL BE CONSTRUCTED OF HOT MIX ASPHALT OR OTHER MATERIAL THAT CAN PROVIDE SMOOTH, HARD SURFACE & WILL MAINTAIN 12:1 SLOPE.
3. CHANNELIZING DEVICES SHALL BE TEMPORARY CONCRETE BARRIERS WITH THE ADDITION OF CONTINUOUS DETECTABLE EDGING.
4. THE CONTINUOUS DETECTABLE EDGINGS SHALL PROTRUDE AT LEAST 6 INCHES ABOVE THE PATHWAY WITH THE BOTTOM OF THE EDGING NO MORE THAN 1½ INCHES ABOVE THE PATHWAY.
5. DETECTABLE BARRICADES SHALL EXTEND AT LEAST 36" ABOVE THE PATHWAY WITH THE BOTTOM OF THE BARRICADE NO MORE THAN 1½ INCHES ABOVE THE PATHWAY. AND SHALL EXTEND THE FULL WIDTH OF THE CLOSURE
6. THE ENGINEER SHOULD CONSIDER ADDITIONAL. ADJACENT LANE CLOSURES WHEN THE POSSIBILITY OF UNPLANNED TRAVELWAY ENCROACHMENTS EXISTS.

KEY:

- SIGN
- CHANNELIZING DEVICES WITH DETECTABLE EDGING
- DETECTABLE BARRICADE
- DIRECTION OF TRAFFIC
- WORK SITE
- PARKING SPACES / SHOULDER AREA
- TEMPORARY RAMP (WITH DETECTABLE SURFACE WARNING)
- EXISTING CURB RAMP

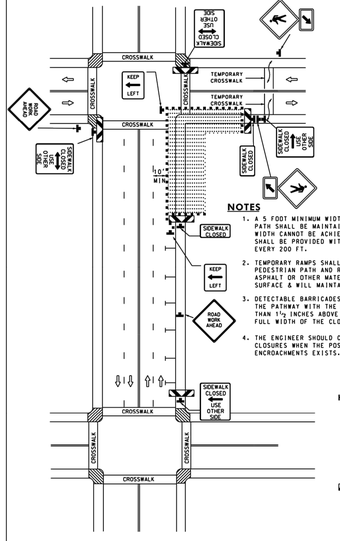
SPECIFICATION	CATEGORY CODE ITEMS
104	

APPROVED _____
DIRECTOR – OFFICE OF TRAFFIC AND SAFETY

APPROVAL • SHA REVISIONS	APPROVAL • FEDERAL HIGHWAY ADMINISTRATION
APPROVAL 7-14-08	APPROVAL 7-3-08
REVISED 8-11-10	REVISED 7-29-10
REVISED	REVISED
REVISED	REVISED

Maryland Department of Transportation
STATE HIGHWAY ADMINISTRATION
STANDARDS FOR HIGHWAYS AND INCIDENTAL STRUCTURES
PED AND CURB–LANE CONTROL/MULTILANE UNDIV. SPEED LESS THAN OR EQUAL TO 40 MPH /OVER 12 HRS. OR NIGHTTIME USE
STANDARD NO. MD 104.06-09A

TEMPORARY TRAFFIC CONTROL TYPICAL APPLICATION ALTERNATE PEDESTRIAN DETOUR ROUTE AT INTERSECTION



IMPORTANT:
THIS DRAWING SHALL BE USED IN COMBINATION WITH THE GENERAL NOTES MD 104.00-01 THROUGH MD 104.00-18 AND STANDARD DETAILS MD 104.01-01 THROUGH MD 104.01-81

NOTES

1. A 5 FOOT MINIMUM WIDTH PEDESTRIAN PATH / ALTERNATE PEDESTRIAN PATH SHALL BE MAINTAINED WHERE POSSIBLE. WHERE A 5 FOOT MIN. WIDTH CANNOT BE ACHIEVED. A MINIMUM WIDTH OF 36 INCHES SHALL BE PROVIDED WITH PASSING ZONES (60 IN X 60 IN) AT LEAST EVERY 200 FT.
2. TEMPORARY RAMPS SHALL HAVE A SLOPE OF 12:1 MAX. THE PEDESTRIAN PATH AND RAMP SHALL BE CONSTRUCTED OF HOT MIX ASPHALT OR OTHER MATERIAL THAT CAN PROVIDE A SMOOTH, HARD SURFACE & WILL MAINTAIN 12:1 SLOPE.
3. DETECTABLE BARRICADES SHALL EXTEND AT LEAST 36" ABOVE THE PATHWAY WITH THE BOTTOM OF THE BARRICADE NO MORE THAN 1½ INCHES ABOVE THE PATHWAY. AND SHALL EXTEND THE FULL WIDTH OF THE CLOSURE.
4. THE ENGINEER SHOULD CONSIDER ADDITIONAL. ADJACENT LANE CLOSURES WHEN THE POSSIBILITY OF UNPLANNED TRAVELWAY ENCROACHMENTS EXISTS.

KEY:

- DIRECTION OF TRAFFIC
- WORK SITE
- TEMPORARY RAMP (WITH DETECTABLE SURFACE WARNING)
- SIGN
- DETECTABLE BARRICADE
- PARKING SPACES / SHOULDER AREA
- EXISTING CURB RAMPS
- CHANNELIZING DEVICES

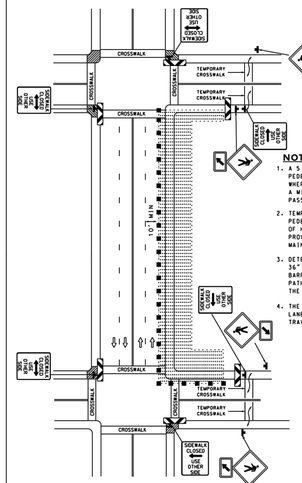
SPECIFICATION	CATEGORY CODE ITEMS
104	

APPROVED _____
DIRECTOR – OFFICE OF TRAFFIC AND SAFETY

APPROVAL • SHA REVISIONS	APPROVAL • FEDERAL HIGHWAY ADMINISTRATION
APPROVAL 7-14-08	APPROVAL 7-3-08
REVISED 8-11-10	REVISED 7-29-10
REVISED	REVISED
REVISED	REVISED

Maryland Department of Transportation
STATE HIGHWAY ADMINISTRATION
STANDARDS FOR HIGHWAYS AND INCIDENTAL STRUCTURES
PED AND CURB–LANE CONTROL/MULTILANE UNDIV. FOR SPEEDS GREATER THAN 40MPH / OVER 12 HRS. OR NIGHTTIME USE
STANDARD NO. MD 104.06-09B

TEMPORARY TRAFFIC CONTROL TYPICAL APPLICATION FOR SIDEWALK CLOSURE ALTERNATE PEDESTRIAN DETOUR ROUTE FOR FULL BLOCK CLOSURE



IMPORTANT:
THIS DRAWING SHALL BE USED IN COMBINATION WITH THE GENERAL NOTES MD 104.00-01 THROUGH MD 104.00-18 AND STANDARD DETAILS MD 104.01-01 THROUGH MD 104.01-81

NOTES

1. A 5 FOOT MINIMUM WIDTH PEDESTRIAN PATH / ALTERNATE PEDESTRIAN PATH SHALL BE MAINTAINED WHERE POSSIBLE. WHERE A 5 FOOT MINIMUM WIDTH CANNOT BE ACHIEVED. A MINIMUM WIDTH OF 36 INCHES SHALL BE PROVIDED WITH PASSING ZONES (60 IN X 60 IN) AT LEAST EVERY 200FT.
2. TEMPORARY RAMPS SHALL HAVE A SLOPE OF 12:1 MAX. PEDESTRIAN PATH AND RAMP SHALL BE CONSTRUCTED OF HOT MIX ASPHALT OR OTHER MATERIAL THAT CAN PROVIDE A SMOOTH, HARD SURFACE & WILL MAINTAIN 12:1 SLOPE.
3. DETECTABLE BARRICADES SHALL EXTEND AT LEAST 36" ABOVE THE PATHWAY WITH THE BOTTOM OF THE BARRICADE NO MORE THAN 1½ INCHES ABOVE THE PATHWAY. AND SHALL EXTEND THE FULL WIDTH OF THE CLOSURE.
4. THE ENGINEER SHOULD CONSIDER ADDITIONAL. ADJACENT LANE CLOSURES WHEN THE POSSIBILITY OF UNPLANNED TRAVELWAY ENCROACHMENTS EXISTS.

KEY:

- SIGN
- DIRECTION OF TRAFFIC
- WORK SITE
- TEMPORARY RAMP (WITH DETECTABLE SURFACE WARNING)
- DETECTABLE BARRICADE
- EXISTING CURB RAMPS
- CHANNELIZING DEVICES

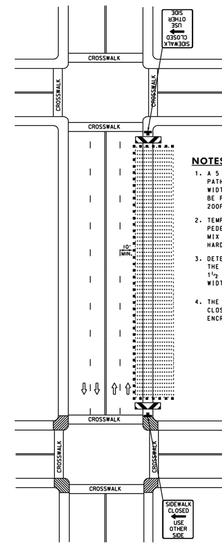
SPECIFICATION	CATEGORY CODE ITEMS
104	

APPROVED _____
DIRECTOR – OFFICE OF TRAFFIC AND SAFETY

APPROVAL • SHA REVISIONS	APPROVAL • FEDERAL HIGHWAY ADMINISTRATION
APPROVAL 7-14-08	APPROVAL 7-3-08
REVISED 8-11-10	REVISED 7-29-10
REVISED	REVISED
REVISED	REVISED

Maryland Department of Transportation
STATE HIGHWAY ADMINISTRATION
STANDARDS FOR HIGHWAYS AND INCIDENTAL STRUCTURES
PED AND CURB–LANE CONTROL/MULTILANE UNDIV. SPEED LESS THAN OR EQUAL TO 40 MPH /OVER 12 HRS. OR NIGHTTIME USE
STANDARD NO. MD–104.06-09C

TEMPORARY TRAFFIC CONTROL TYPICAL APPLICATION ALTERNATE PEDESTRIAN DETOUR ROUTE USING OPPOSITE SIDEWALK



IMPORTANT:
THIS DRAWING SHALL BE USED IN COMBINATION WITH THE GENERAL NOTES MD 104.00-01 THROUGH MD 104.00-18 AND STANDARD DETAILS MD 104.01-01 - MD 104.01-81

NOTES

1. A 5 FOOT MINIMUM WIDTH PEDESTRIAN PATH / ALTERNATE PEDESTRIAN PATH SHALL BE MAINTAINED WHERE POSSIBLE. WHERE A 5 FOOT MINIMUM WIDTH CANNOT BE ACHIEVED. A MINIMUM WIDTH OF 36 INCHES SHALL BE PROVIDED WITH PASSING ZONES (60 IN X 60 IN) AT LEAST EVERY 200FT.
2. TEMPORARY RAMPS SHALL HAVE A SLOPE OF 12:1 MAX. THE PEDESTRIAN PATH AND RAMP SHALL BE CONSTRUCTED OF HOT MIX ASPHALT OR OTHER MATERIAL THAT CAN PROVIDE A SMOOTH, HARD SURFACE & WILL MAINTAIN 12:1 SLOPE.
3. DETECTABLE BARRICADES SHALL EXTEND AT LEAST 36" ABOVE THE PATHWAY WITH THE BOTTOM OF THE BARRICADE NO MORE THAN 1½ INCHES ABOVE THE PATHWAY. AND SHALL EXTEND THE FULL WIDTH OF THE CLOSURE.
4. THE ENGINEER SHOULD CONSIDER ADDITIONAL. ADJACENT LANE CLOSURES WHEN THE POSSIBILITY OF UNPLANNED TRAVELWAY ENCROACHMENTS EXISTS.

KEY:

- DIRECTION OF TRAFFIC
- WORK SITE
- SIGN
- DETECTABLE BARRICADE
- EXISTING CURB RAMPS
- CHANNELIZING DEVICES

SPECIFICATION	CATEGORY CODE ITEMS
104	

APPROVED _____
DIRECTOR – OFFICE OF TRAFFIC AND SAFETY

APPROVAL • SHA REVISIONS	APPROVAL • FEDERAL HIGHWAY ADMINISTRATION
APPROVAL 7-14-08	APPROVAL 7-3-08
REVISED 8-11-10	REVISED 7-29-10
REVISED	REVISED
REVISED	REVISED

Maryland Department of Transportation
STATE HIGHWAY ADMINISTRATION
STANDARDS FOR HIGHWAYS AND INCIDENTAL STRUCTURES
PED AND CURB–LANE CONTROL /MULTILANE UNDIV. FOR SPEEDS GREATER THAN 40MPH / OVER 12 HRS. OR NIGHTTIME USE
STANDARD NO. MD 104.06-09D

NOTES:

1. PEDESTRIAN ACCESS SHALL BE MAINTAINED AT ALL TIMES THROUGHOUT CONSTRUCTION. THE CONTRACTOR SHALL UTILIZE THE APPLICABLE STANDARD DETAIL (MD 104.06-09A-D) BASED ON THE ACTIVE WORK ZONE.

DRAFT
NOT FOR CONSTRUCTION

RJM ENGINEERING

NO.	REVISION	DATE	BY

MONTGOMERY COUNTY
DEPARTMENT OF TRANSPORTATION
GAITHERSBURG, MARYLAND

RECOMMENDED FOR APPROVAL

_____ _____
Chief, Design Section Date

APPROVED

_____ _____
Chief, Division of Transportation Engineering Date

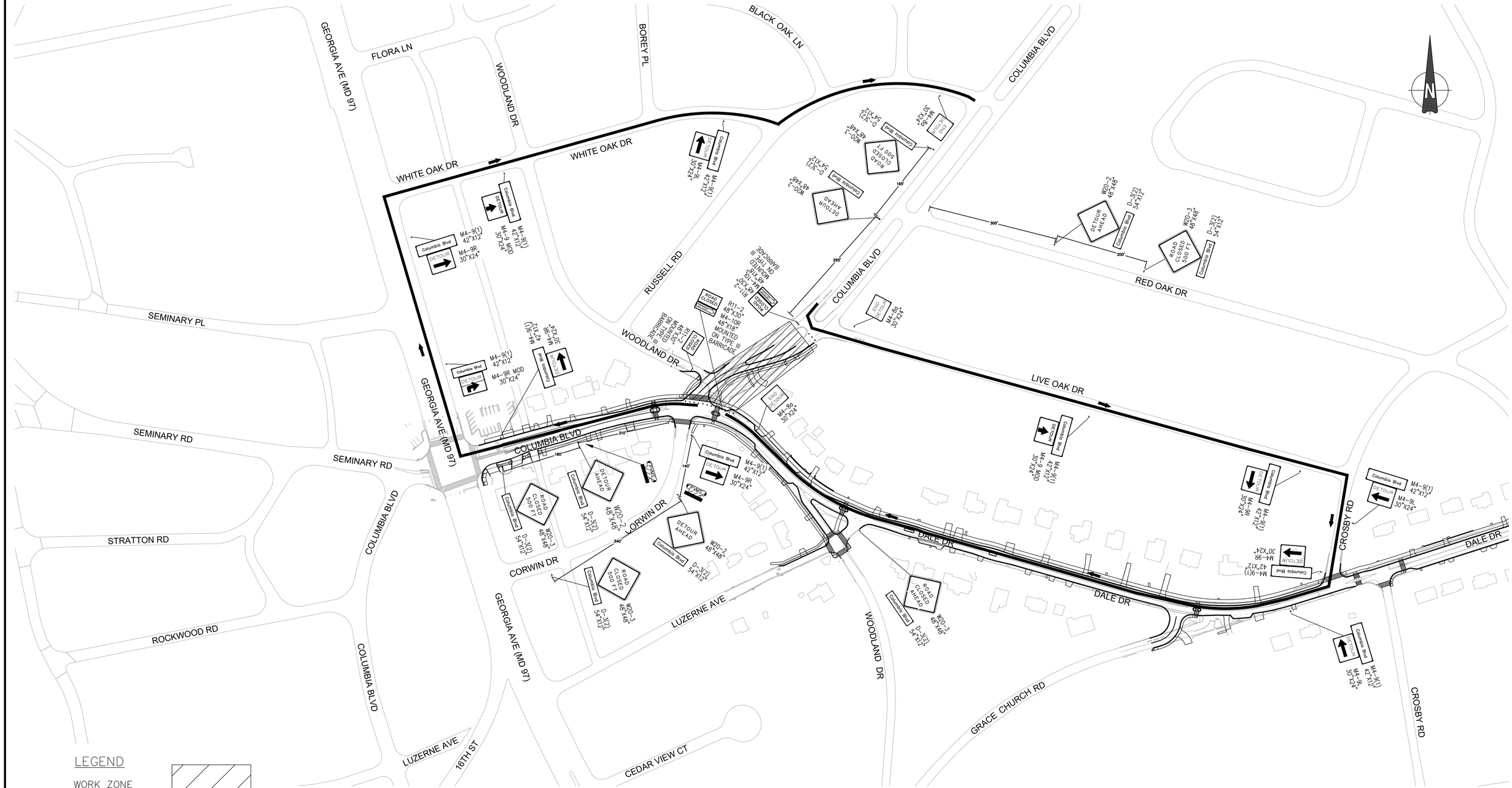
Designed by: KJS Drawn by: LZ Checked by: DZ

MT-04 MAINTENANCE OF TRAFFIC
PEDESTRIAN MOT DETAILS

DALE DRIVE SHARED USE PATH

SCALE: NOT TO SCALE DATE: NOVEMBER 2022

CIP No. : 502109 SHEET 50 of 181



LEGEND

- WORK ZONE
- SIGN LOCATION
- TYPE III BARRICADE
- TRAFFIC BARRELS
- DETOUR ROUTE
- DETOUR DIRECTION
- PORTABLE VARIABLE MESSAGE SIGN (PVMS)

DETOUR PLAN - COLUMBIA BOULEVARD/WOODLAND DRIVE

SCALE: 1" = 100'

NOTES:

1. CONTRACTOR MAY ADJUST THE SIGN SPACING AND LOCATION BASED ON SITE CONDITIONS WITH THE APPROVAL OF THE ENGINEER.
2. INSTALL PVMS TWO WEEKS PRIOR TO THE START OF CONSTRUCTION AS INDICATED ON SHEET 47.

DRAFT
NOT FOR CONSTRUCTION

RJM ENGINEERING

NO.	REVISION	DATE	BY

MONTGOMERY COUNTY
DEPARTMENT OF TRANSPORTATION
GAITHERSBURG, MARYLAND

RECOMMENDED FOR APPROVAL

Chief, Design Section — Date

APPROVED

Chief, Division of Transportation Engineering — Date

Designed by: KJS Drawn by: LZ Checked by: DZ

MT-05 MAINTENANCE OF TRAFFIC
DETOUR PLAN-COLUMBIA/WOODLAND

DALE DRIVE SHARED USE PATH

0 100' 200'

SCALE: 1"=100' DATE: NOVEMBER 2022

CIP No. : 502109 SHEET 51 of 181

FILE NAME: P:\MoCo\Dale Drive Bike-Ped Path\00_Working\pMT-P001-DaleDr.dwg LAYOUT NAME: MT-05 Columbia-Woodland Detour PLOTTED: Tuesday, November 22, 2022 - 2:35pm USER: kevin

LEGEND

WORK ZONE

SIGN LOCATION

TYPE III BARRICADE

TRAFFIC BARRELS

TRAFFIC FLOW DIRECTION

295

N

ROAD CLOSED
DETOUR
R11-2 48"X30"
M4-10R 48"X18" MOUNTED ON TYPE III BARRICADE

ROAD CLOSED
DETOUR
R11-2 48"X30"
M4-10R 48"X18" MOUNTED ON TYPE III BARRICADE

ROAD CLOSED
R11-2 48"X30" MOUNTED ON TYPE III BARRICADE

END DETOUR
M4-8a 30"X24"

END DETOUR
M4-8a 30"X24"

Columbia Blvd
DETOUR
M4-9(1) 42"X12"
M4-9R 30"X24"

Columbia Blvd
DETOUR
M4-9(1) 42"X12"
M4-9R 30"X24"

10' MIN LANE WIDTH, TYP.

210'

180'

140'

DETOUR AHEAD
W20-2 48"X48"

Columbia Blvd
D-3(2) 54"X12"

ROAD CLOSED 500 FT
W20-3 48"X48"

Columbia Blvd
D-3(2) 54"X12"

DETOUR AHEAD
W20-2 48"X48"

TRAFFIC CONTROL PLAN - COLUMBIA BOULEVARD/WOODLAND DRIVE

SCALE: 1" = 30'

NOTES:

1. CONTRACTOR MAY ADJUST THE SIGN SPACING AND LOCATION BASED ON SITE CONDITIONS WITH THE APPROVAL OF THE ENGINEER.
2. REFER TO MT-05 COLUMBIA-WOODLAND DETOUR ON SHEET 51 FOR ADDITIONAL DETOUR AND ADVANCE WARNING SIGNS.

DRAFT
NOT FOR CONSTRUCTION

RJM ENGINEERING

NO.	REVISION	DATE	BY

MONTGOMERY COUNTY
DEPARTMENT OF TRANSPORTATION
GAITHERSBURG, MARYLAND

RECOMMENDED FOR APPROVAL

Chief, Design Section — Date

APPROVED

Chief, Division of Transportation Engineering — Date

Designed by: KJS Drawn by: LZ Checked by: DZ

MT-06 MAINTENANCE OF TRAFFIC TCP - COLUMBIA/WOODLAND

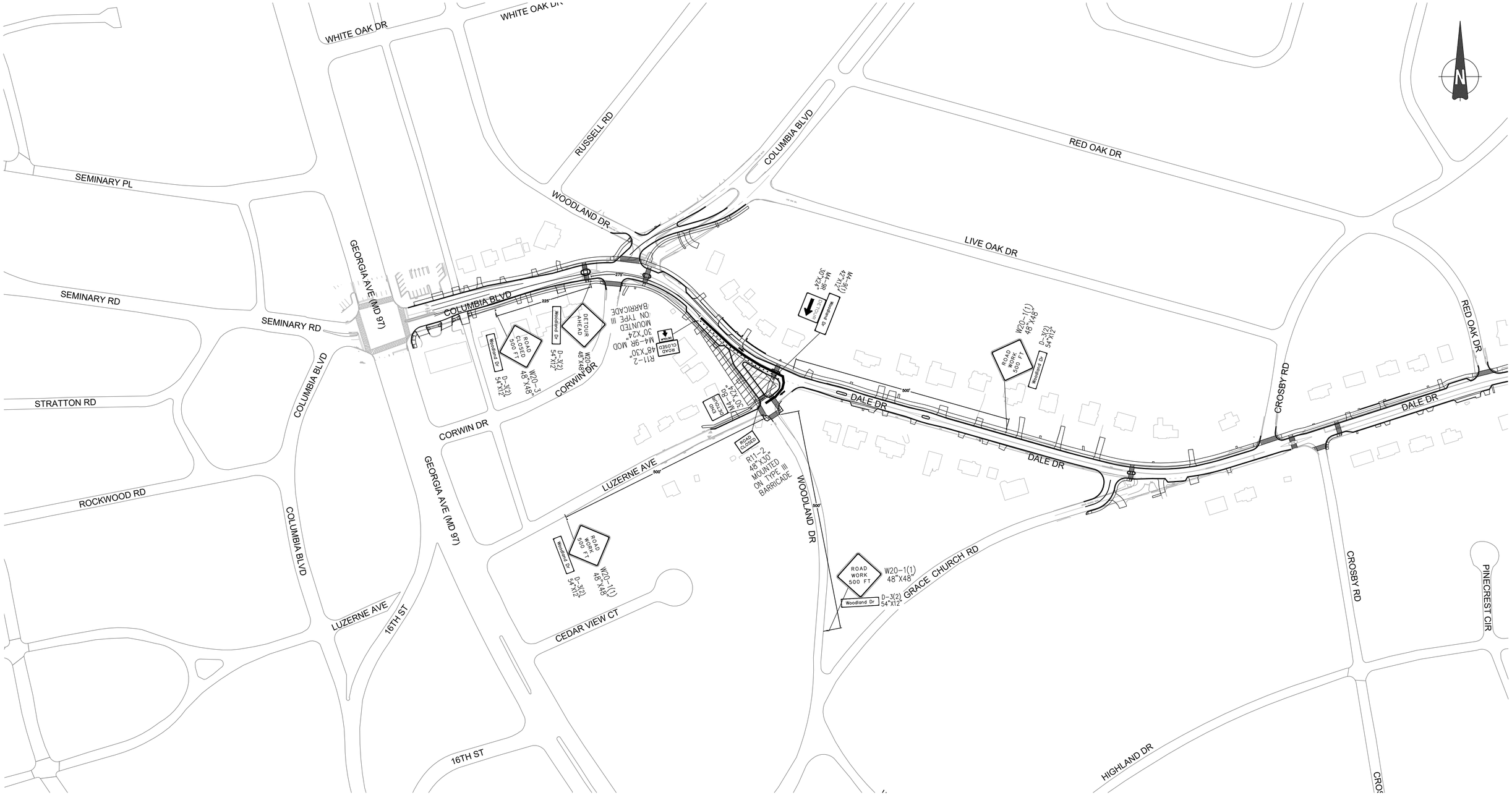
DALE DRIVE SHARED USE PATH

0 30' 60'

SCALE: 1"=30' DATE: NOVEMBER 2022

CIP No. : 502109 SHEET 52 of 181

FILE NAME: P:\MoCo\Dale Drive Bike-Ped Path\00_Working\pMT-P001-DaleDr.dwg LAYOUT NAME: MT-06 Columbia-Woodland MOT PLOTTED: Tuesday, November 22, 2022 - 2:35pm USER: kevin



LEGEND

- WORK ZONE
- SIGN LOCATION
- TYPE III BARRICADE
- TRAFFIC BARRELS
- DETOUR ROUTE
- DETOUR DIRECTION

DETOUR PLAN - LUZERNE AVENUE/WOODLAND DRIVE

SCALE: 1" = 100'

NOTES:

1. CONTRACTOR MAY ADJUST THE SIGN SPACING AND LOCATION BASED ON SITE CONDITIONS WITH THE APPROVAL OF THE ENGINEER.
2. INSTALL PVMS TWO WEEKS PRIOR TO THE START OF CONSTRUCTION AS INDICATED ON SHEET 47.

DRAFT
NOT FOR CONSTRUCTION

RJM ENGINEERING

NO.	REVISION	DATE	BY

MONTGOMERY COUNTY
DEPARTMENT OF TRANSPORTATION
GAITHERSBURG, MARYLAND

RECOMMENDED FOR APPROVAL

Chief, Design Section — Date

APPROVED

Chief, Division of Transportation Engineering — Date

Designed by: KJS Drawn by: LZ Checked by: DZ

MT-07 MAINTENANCE OF TRAFFIC DETOUR PLAN-LUZERNE/WOODLAND

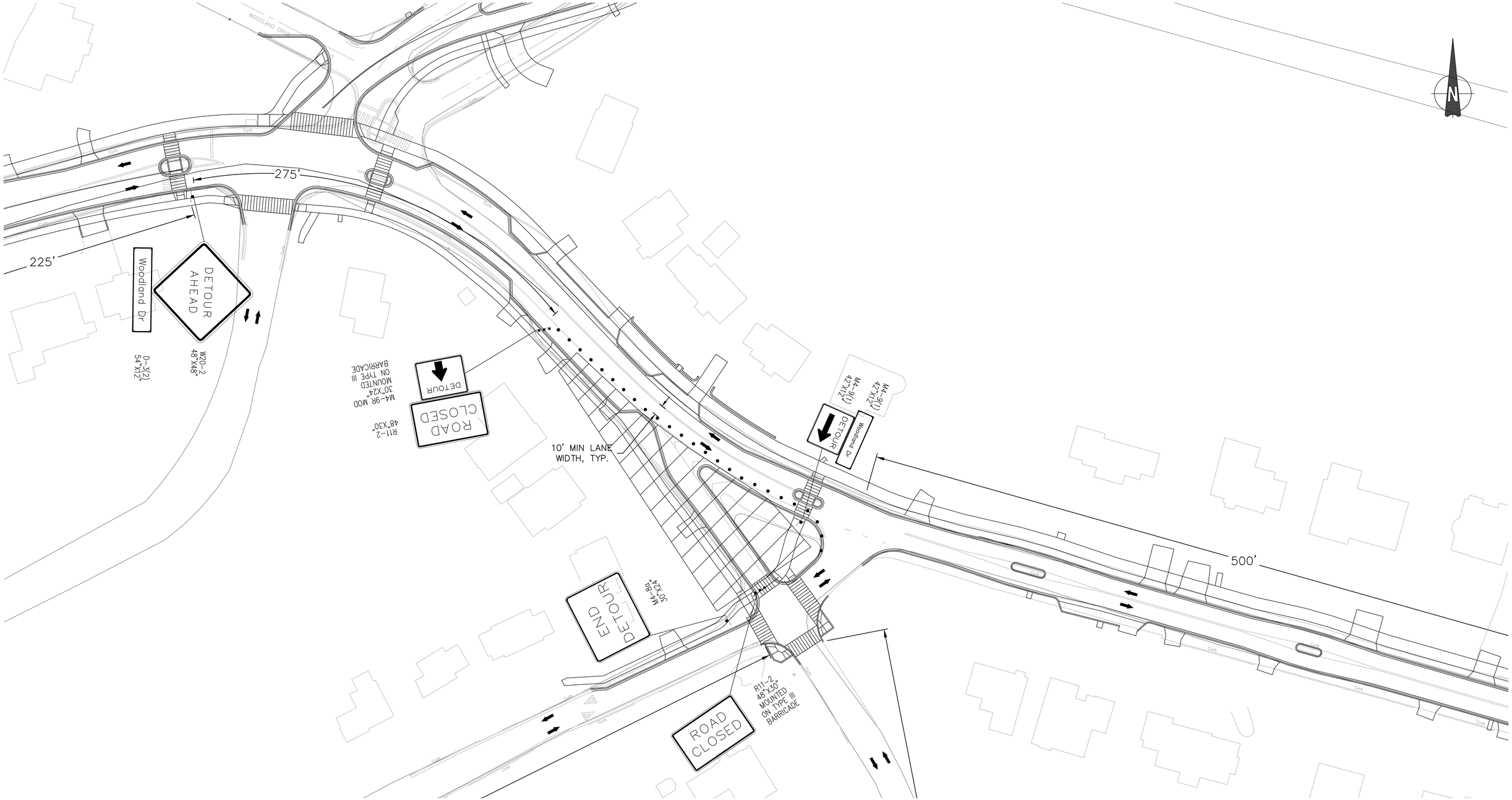
DALE DRIVE SHARED USE PATH

0 100' 200'

SCALE: 1"=100' DATE: NOVEMBER 2022

CIP No. : 502109 SHEET 53 of 181

FILE NAME: P:\MoCo\Dale Drive Bike-Ped Path\00_Working\pMT-P001-DaleDr.dwg LAYOUT NAME: MT-07 Luzerne Ave Detour PLOTTED: Tuesday, November 22, 2022 - 2:35pm USER: kevin



TRAFFIC CONTROL PLAN - LUZERNE AVENUE/WOODLAND DRIVE

SCALE: 1" = 30'

LEGEND

WORK ZONE

SIGN LOCATION

TYPE III BARRICADE

TRAFFIC BARRELS

TRAFFIC FLOW DIRECTION

NOTES:

1. CONTRACTOR MAY ADJUST THE SIGN SPACING AND LOCATION BASED ON SITE CONDITIONS WITH THE APPROVAL OF THE ENGINEER.
2. REFER TO MT-07 LUZERNE AVE DETOUR ON SHEET 53 FOR ADDITIONAL DETOUR AND ADVANCE WARNING SIGNS.

DRAFT
NOT FOR CONSTRUCTION

RJM ENGINEERING

NO.	REVISION	DATE	BY

MONTGOMERY COUNTY
DEPARTMENT OF TRANSPORTATION
GAITHERSBURG, MARYLAND

RECOMMENDED FOR APPROVAL

Chief, Design Section — Date

APPROVED

Chief, Division of Transportation Engineering — Date

Designed by: KJS Drawn by: LZ Checked by: DZ

MT-08 MAINTENANCE OF TRAFFIC
TCP - LUZERNE/WOODLAND

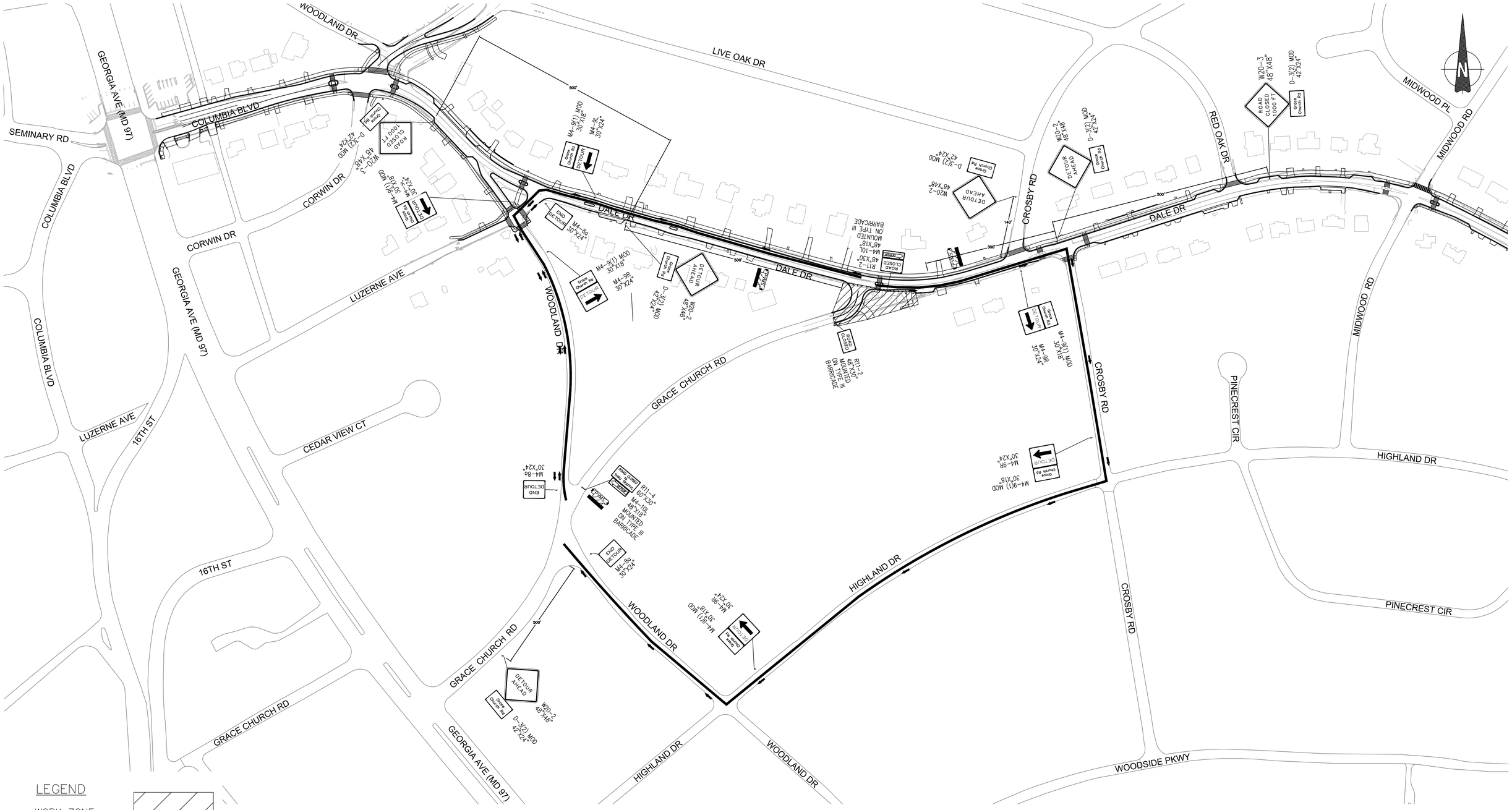
DALE DRIVE SHARED USE PATH

0 30' 60'

SCALE: 1"=30' DATE: NOVEMBER 2022

CIP No. : 502109 SHEET 54 of 181

FILE NAME: P:\MoCo\Dale Drive Bike-Ped Path\00_Working\pMT-P001-DaleDr.dwg LAYOUT NAME: MT-08 Luzerne Ave MOT PLOTTED: Tuesday, November 22, 2022 - 2:35pm USER: kevin



DETOUR PLAN - GRACE CHURCH ROAD

SCALE: 1" = 100'

LEGEND

- WORK ZONE
- SIGN LOCATION
- TYPE III BARRICADE
- TRAFFIC BARRELS
- DETOUR ROUTE
- DETOUR DIRECTION
- PORTABLE VARIABLE MESSAGE SIGN (PVMS)

NOTES:

1. CONTRACTOR MAY ADJUST THE SIGN SPACING AND LOCATION BASED ON SITE CONDITIONS WITH THE APPROVAL OF THE ENGINEER.
2. INSTALL PVMS TWO WEEKS PRIOR TO THE START OF CONSTRUCTION AS INDICATED ON SHEET 47.

DRAFT
NOT FOR CONSTRUCTION

RJM ENGINEERING

NO.	REVISION	DATE	BY

MONTGOMERY COUNTY
DEPARTMENT OF TRANSPORTATION
GAITHERSBURG, MARYLAND

RECOMMENDED FOR APPROVAL

Chief, Design Section — Date

APPROVED

Chief, Division of Transportation Engineering — Date

Designed by: KJS Drawn by: LZ Checked by: DZ

MT-09 MAINTENANCE OF TRAFFIC DETOUR PLAN-GRACE CHURCH RD

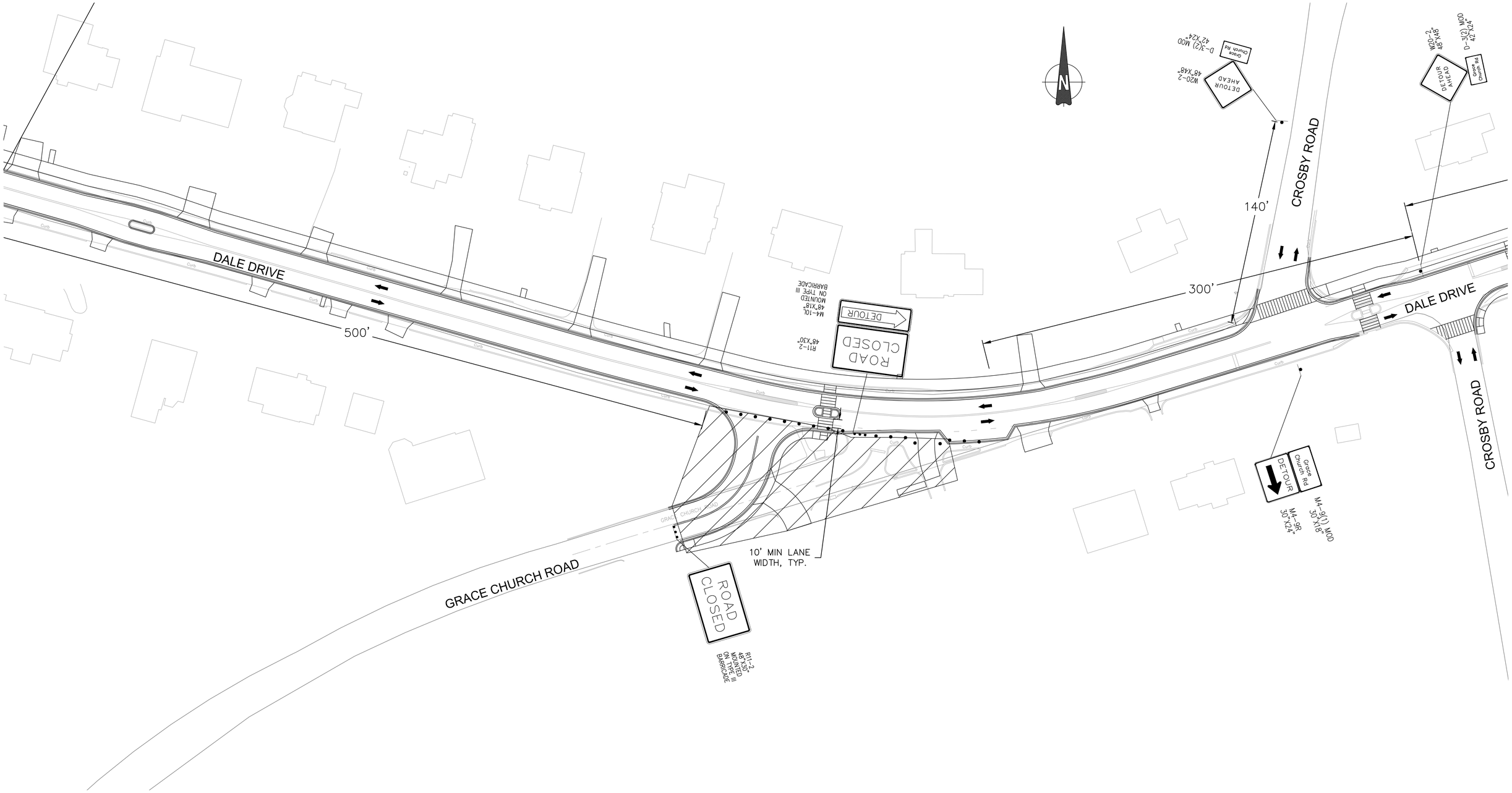
DALE DRIVE SHARED USE PATH

0 100' 200'

SCALE: 1"=100' DATE: NOVEMBER 2022

CIP No. : 502109 SHEET 55 of 181

FILE NAME: P:\MoCo\Dale Drive Bike-Ped Path\00_Working\pMT-P001-DaleDr.dwg LAYOUT NAME: MT-09 Grace Church Rd Detour PLOTTED: Tuesday, November 22, 2022 - 2:35pm USER: kevin



LEGEND

WORK ZONE

SIGN LOCATION

TYPE III BARRICADE

TRAFFIC FLOW DIRECTION

TRAFFIC CONTROL PLAN - GRACE CHURCH ROAD

SCALE: 1" = 30'

NOTES:

1. CONTRACTOR MAY ADJUST THE SIGN SPACING AND LOCATION BASED ON SITE CONDITIONS WITH THE APPROVAL OF THE ENGINEER.
2. REFER TO MT-09 GRACE CHURCH RD DETOUR ON SHEET 55 FOR ADDITIONAL DETOUR AND ADVANCE WARNING SIGNS.

DRAFT
NOT FOR CONSTRUCTION

RJM ENGINEERING

NO.	REVISION	DATE	BY

MONTGOMERY COUNTY
DEPARTMENT OF TRANSPORTATION
GAITHERSBURG, MARYLAND

RECOMMENDED FOR APPROVAL

Chief, Design Section — Date

APPROVED

Chief, Division of Transportation Engineering — Date

Designed by: KJS Drawn by: LZ Checked by: DZ

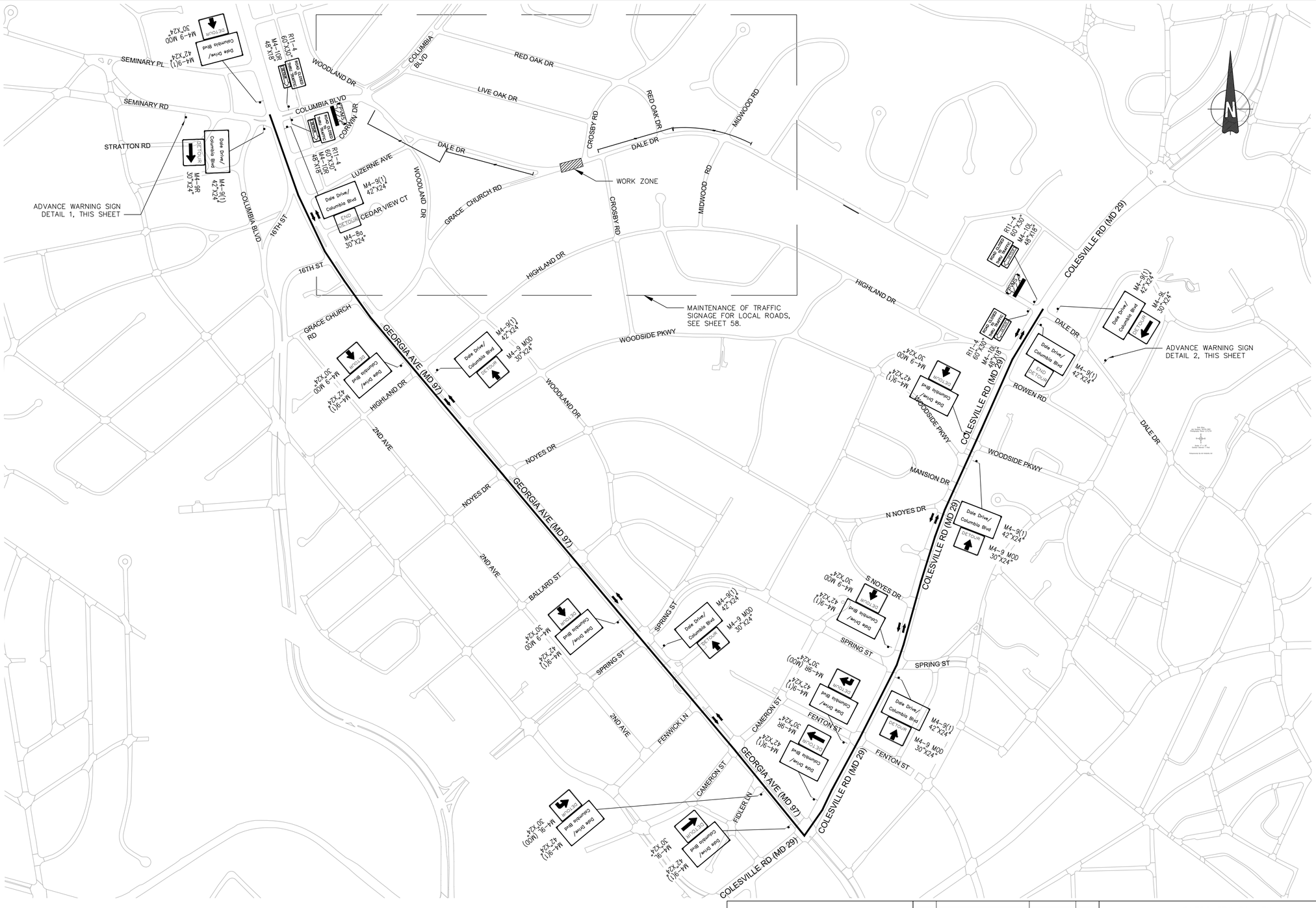
MT-10 MAINTENANCE OF TRAFFIC TCP - GRACE CHURCH RD

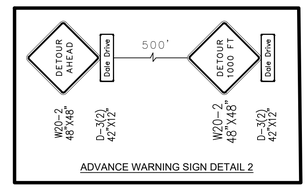
DALE DRIVE SHARED USE PATH

0 30' 60'

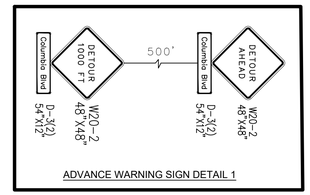
SCALE: 1"=30' DATE: NOVEMBER 2022

CIP No. : 502109 SHEET 56 of 181





ADVANCE WARNING SIGN DETAIL 2



ADVANCE WARNING SIGN DETAIL 1

NOTES:

1. CONTRACTOR MAY ADJUST THE SIGN SPACING AND LOCATION BASED ON SITE CONDITIONS WITH THE APPROVAL OF THE ENGINEER.
2. INSTALL PVMS TWO WEEKS PRIOR TO THE START OF CONSTRUCTION AS INDICATED ON SHEET 47.
3. ONLY THE CONSTRUCTION CROSSING DALE DRIVE (I.E., INSTALLATION OF THE PROPOSED STORM DRAIN UNDER DALE DRIVE AND CONNECTING INLETS) SHALL BE COMPLETED UNDER A ROAD CLOSURE AND DETOUR. THE CONSTRUCTION OF THE REMAINING DRAINAGE STRUCTURES AND PIPING ALONG DALE DRIVE SHALL BE PERFORMED USING FLAGGING OPERATIONS (REFER TO PHASE 1 AND 2 OF THE SEQUENCE OF CONSTRUCTION, SHEET 47).

LEGEND

WORK ZONE

SIGN LOCATION

DETOUR ROUTE

DETOUR DIRECTION

PORTABLE VARIABLE MESSAGE SIGN (PVMS)

PVMS

DETOUR PLAN - DALE DRIVE

SCALE: 1" = 300'

DRAFT
NOT FOR CONSTRUCTION

RJM ENGINEERING

NO.	REVISION	DATE	BY

MONTGOMERY COUNTY
DEPARTMENT OF TRANSPORTATION
GAITHERSBURG, MARYLAND

RECOMMENDED FOR APPROVAL

Chief, Design Section — Date

APPROVED

Chief, Division of Transportation Engineering — Date

Designed by: KJS Drawn by: KJS Checked by: DZ

MT-11 MAINTENANCE OF TRAFFIC DETOUR PLAN-DALE DRIVE

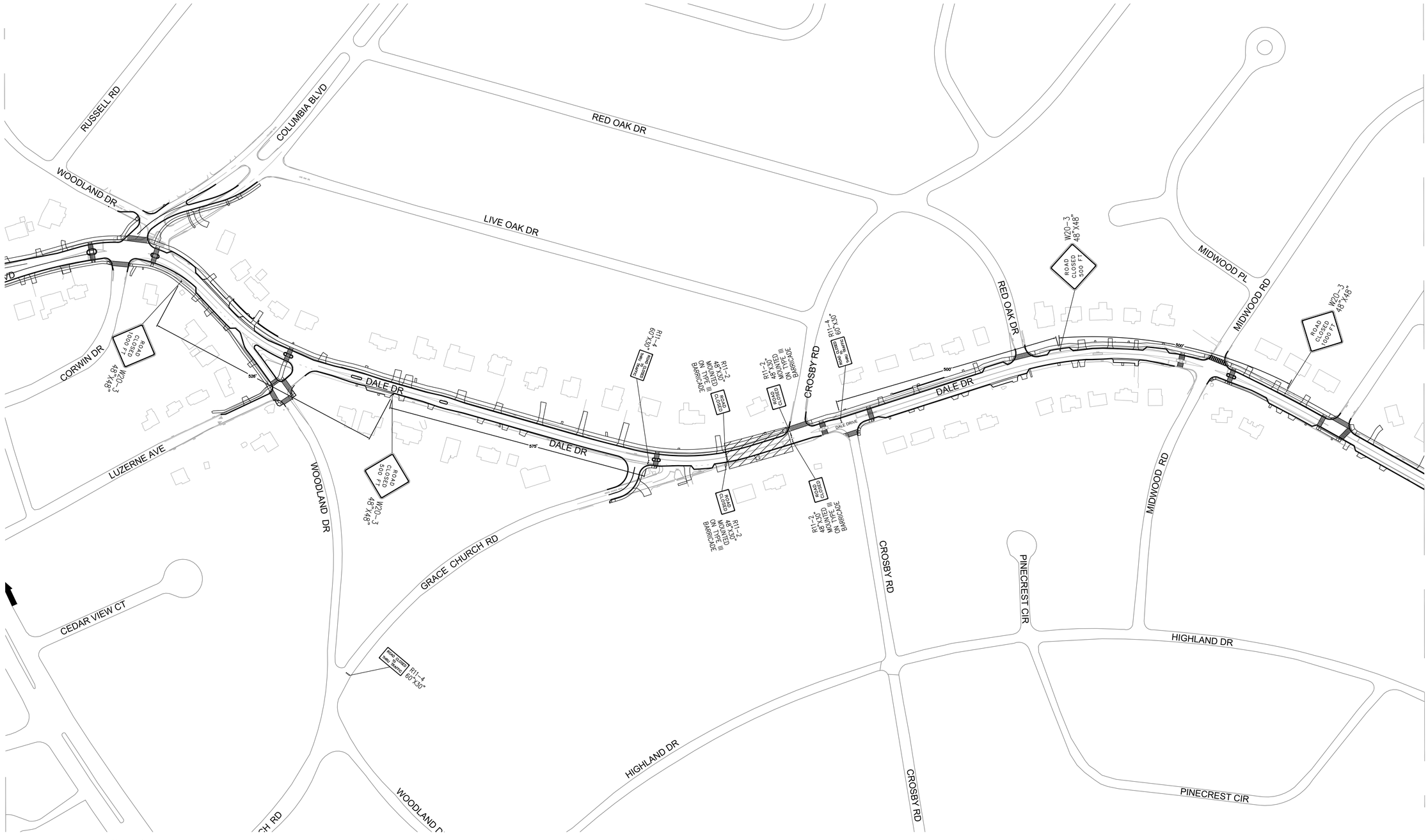
DALE DRIVE SHARED USE PATH

0 300' 600'

SCALE: 1"=300' DATE: NOVEMBER 2022

CIP No. : 502109 SHEET 57 of 181

FILE NAME: P:\MoCo\Dale Drive Bike-Ped Path\00_Working\pMT-P001-DaleDr.dwg LAYOUT NAME: MT-11 Dale Dr Detour PLOTTED: Tuesday, November 22, 2022 - 2:36pm USER: kevin



LEGEND

- WORK ZONE
- SIGN LOCATION
- TYPE III BARRICADE
- TRAFFIC BARRELS

NOTES:

1. CONTRACTOR MAY ADJUST THE SIGN SPACING AND LOCATION BASED ON SITE CONDITIONS WITH THE APPROVAL OF THE ENGINEER.
2. REFER TO THE THE MT-11 DALE DR DETOUR ON SHEET 57 FOR ADDITIONAL DETOUR AND ADVANCE WARNING SIGNS.
3. ONLY THE CONSTRUCTION CROSSING DALE DRIVE (I.E., INSTALLATION OF THE PROPOSED STORM DRAIN UNDER DALE DRIVE AND CONNECTING INLETS) SHALL BE COMPLETED UNDER A ROAD CLOSURE AND DETOUR. THE CONSTRUCTION OF THE REMAINING DRAINAGE STRUCTURES AND PIPING ALONG DALE DRIVE SHALL BE PERFORMED USING FLAGGING OPERATIONS (REFER TO PHASE 1 AND 2 OF THE SEQUENCE OF CONSTRUCTION, SHEET 47).

DETOUR PLAN - GRACE CHURCH ROAD

SCALE: 1" = 100'

DRAFT
NOT FOR CONSTRUCTION

RJM ENGINEERING

NO.	REVISION	DATE	BY

MONTGOMERY COUNTY
DEPARTMENT OF TRANSPORTATION
GAITHERSBURG, MARYLAND

RECOMMENDED FOR APPROVAL

Chief, Design Section — Date

APPROVED

Chief, Division of Transportation Engineering — Date

Designed by: KJS Drawn by: KJS Checked by: DZ

MT-12 MAINTENANCE OF TRAFFIC TCP – DALE DR

DALE DRIVE SHARED USE PATH

0 100' 200'

SCALE: 1"=100' DATE: NOVEMBER 2022

CIP No. : 502109 SHEET 58 of 181

CRITERIA

THE CONTRACTOR SHALL BE GOVERNED BY THE STANDARDS AND REQUIREMENTS OF THE FOLLOWING PUBLICATIONS, EXCEPT AS MODIFIED BY THE SPECIAL PROVISIONS OF THIS CONTRACT:

DESIGN

MDOT SHA – "MARYLAND MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES", 2011 EDITION AND SUBSEQUENT REVISIONS. (MdMUTCD)

A A S H T O – "HIGHWAY SAFETY DESIGN AND OPERATIONS GUIDE" –1997

A A S H T O – "STANDARD SPECIFICATIONS FOR STRUCTURAL SUPPORTS FOR HIGHWAY SIGNS LUMINAIRES AND TRAFFIC SIGNALS", 2001 EDITION (CATEGORY II FOR ALL OVERHEAD AND CANTILEVER SIGN STRUCTURES).

MATERIALS AND CONSTRUCTION

MDOT SHA – "STANDARD SPECIFICATIONS FOR CONSTRUCTION & MATERIALS", 2022 EDITION AND SUBSEQUENT SUPPLEMENTS.

DESIGN WIND

100 MPH – WOOD SUPPORTS
10 YEAR RECURRENCE INTERVAL

100 MPH – GROUND MOUNT SIGN STEEL SUPPORTS
10 YEAR RECURRENCE INTERVAL

100 MPH – OVERHEAD AND CANTILEVER STRUCTURES
50 YEAR RECURRENCE INTERVAL

} ALL DISTRICTS

DESIGN STRESS

SOIL BEARING PRESSURE – S = 3,000 P.S.F. (ASSUMED)
SEE MATERIAL & CONSTRUCTION ABOVE AND SPECIAL PROVISIONS FOR DESIGN STRESSES FOR STRUCTURAL STEEL, ALUMINUM, REINFORCING STEEL AND CONCRETE.

CHAMFER

ALL EXPOSED EDGES OF CONCRETE SHALL HAVE A 3/4" X 3/4" CHAMFER.

CLASSIFICATION OF SIGNS

SIGNS ARE DIVIDED INTO TWO (2) GENERAL CATEGORIES.

1. GUIDE SIGNS
   - A) STRUCTURAL TYPES
     - OH – OVERHEAD
     - C – CANTILEVER
     - GM – GROUND MOUNT, BREAKAWAY OR NON–BREAKWAY
     - BM – BRIDGE MOUNTED
   - B) PANELS
     - MATERIAL – EXTRUDED ALUMINUM
     - COPY – DIRECT APPLIED
       1) HIGH INTENSITY (NEW SIGNS AND REVISIONS TO EXISTING SIGNS)

2. STANDARD SIGNS (REGULATORY, WARNING, ETC.)
   - A) STRUCTURAL TYPES
     - WOOD SUPPORTS
     - SQUARE TUBE
   - B) PANELS
     - MATERIAL – SHEET ALUMINUM
     - COPY – DIRECT APPLIED

IDENTIFICATION OF SIGNS AND PANELS

GUIDE SIGNS

EACH GUIDE SIGN IS IDENTIFIED BY A SIGN NUMBER ON THE PLANS AND IN THE TABULATIONS. (GM–1, GM–2, GM–3, etc)
SIGNS ON STRUCTURES ARE IDENTIFIED WITH A NUMBER AND WHERE VARIATIONS OCCUR, A LOWER CASE LETTER. (OH–1a, OH–1b, OH–1c)

STANDARD SIGNS

STANDARD SIGNS ARE IDENTIFIED BY PANEL NUMBERS AND ARE CLASSIFIED AS FOLLOWS
- R – REGULATORY
- W – WARNING
- M – ROUTE MARKERS AND ACCESSORIES
- D – DESTINATION AND MILEAGE PANELS
- S – SCHOOL

PANELS SHALL BE DESIGNATED TO AGREE WITH MARYLAND STANDARD SIGN BOOK. EACH STANDARD SIGN IS IDENTIFIED FIRST BY THE SHEET NUMBER, THEN BY THE NUMERICAL ORDER OF THE SIGN AS IT APPEARS ON THE PLAN.
FOR EXAMPLE SHEET SN 2.1–101,102,103, ETC. SHEET SN 2.2–201,202,203,ETC.

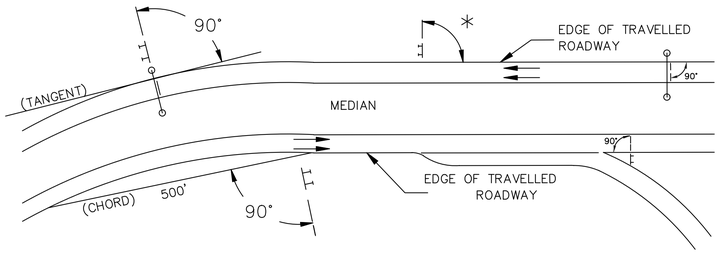
PANEL LAYOUT AND ALPHABETS

1. GUIDE SIGN PANEL LAYOUTS ARE BASED ON THE A.A.S.H.T.O. MANUALS NOTED ABOVE.
2. STANDARD SIGN PANEL LAYOUTS ARE BASED ON THE MdMUTCD WITH SPECIFICATIONS DETAILED IN THE MARYLAND STATE HIGHWAY ADMINISTRATION PUBLICATION, "STANDARD SIGN BOOK", AVAILABLE ONLINE @ https: /www.marylandroads.com/businesswithsha/bizStdsSpecs/desManualStdPub/publicationsonline/oots/internet_signbook.asp

REFLECTORIZATION

BACKGROUNDS, BORDERS, TEXTS AND ALL OTHER ELEMENTS OF SIGN PANELS SHALL BE REFLECTORIZED EXCEPT WHERE NOTED. REFER TO PROJECT REQUIREMENTS FOR MORE DETAIL.

ORIENTATION OF SIGN FACES



* UNDER 30 FEET FROM TRAVELLED ROADWAY TO NEAR EDGE OF SIGN – 93^ AWAY FROM THE ROAD TO AVOID SPECULAR REFLECTION AS INDICATED IN 813.03 OF THE MARYLAND STANDARD SPECIFICATIONS FOR CONSTRUCTION AND MATERIALS.

OVER 30 FEET FROM TRAVELLED ROADWAY TO NEAR EDGE OF SIGN – 90^

SIGN LOCATIONS

1. GUIDE SIGNS ARE LOCATED ON THE PLANS BY DIMENSION TO SURVEY STATIONS, OR WHEN NECESSARY, TO IDENTIFIABLE PHYSICAL FEATURES.
2. ALL CHANGES IN THE LOCATIONS OF SIGNS AS SHOWN ON THE PLAN SHALL HAVE THE PRIOR APPROVAL OF THE ENGINEER.

EXISTING UTILITIES

THE ENGINEER DOES NOT WARRANT OR GUARANTEE THE ACCURACY OR COMPLETENESS OF UTILITY INFORMATION SHOWN ON THE PLAN. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO LOCATE AND PROTECT ALL EXISTING FACILITIES WHICH MIGHT BE AFFECTED BY THIS WORK OR HIS OPERATION.

ROADSIDE SIGNS

1. VERTICAL ALIGNMENT
   POSITION PANEL SO FACE IS PLUMB.
2. HORIZONTAL ALIGNMENT (SEE DIAGRAM ABOVE)
   - A) ON STRAIGHT ROADWAY SECTIONS, ANGLE OF SIGN FACE TO ROADWAY VARIES WITH DISTANCE FROM TRAVELLED ROADWAY TO NEAR EDGE OF SIGN – SEE DIAGRAM.
   - B) ON THE INSIDE OF HORIZONTAL CURVES, POSITION SIGN SO FACE OF PANEL MAKES AN ANGLE OF 90^ WITH A CHORD BETWEEN A POINT ON NEAR EDGE OF PAVEMENT AT SIGN LOCATION AND A POINT ON EDGE OF PAVEMENT 500' IN ADVANCE OF SIGN.
   - C) ON THE OUTSIDE OF HORIZONTAL CURVES, POSITION SIGN SO FACE OF PANEL IS AT RIGHT ANGLES TO THE TANGENT OF THE CURVE AT THE SIGN LOCATION.
   - D) POSITIONING OF SIGNS AT GORES AND RAMP SEPARATIONS IS REFERRED TO THE NORMAL EDGE OF THE MAINLINE ROADWAY.

OVERHEAD SIGNS

1. VERTICAL ALIGNMENT
   POSITION PANELS FOR ALL OVERHEAD STRUCTURES SO THAT PANEL FACE IS PLUMB.
2. OVERHEAD SIGN STRUCTURES SHALL NOT BE ERECTED WITHOUT ATTACHING LUMINAIRES, SUPPORTS, AND/OR SIGNS.
3. HORIZONTAL ALIGNMENT
   - A) POSITION ALL OVERHEAD SIGNS SO THAT THE FACE OF THE PANEL IS AT RIGHT ANGLES TO THE NORMAL EDGE OF ROADWAY, IF ON A STRAIGHT ROADWAY SECTION.
   - B) POSITION ALL OVERHEAD SIGNS SO THAT THE FACE OF THE PANEL IS AT RIGHT ANGLES TO THE TANGENT OF THE CURVE AT SIGN LOCATION, IF ON A HORIZONTAL CURVE.
   - C) POSITIONING OF SIGNS AT GORES AND RAMP SEPARATIONS IS REFERRED TO THE NORMAL EDGE OF THE MAINLINE ROADWAY.
4. VERTICAL CLEARANCE
   - A) OVERHEAD SIGNS SHALL HAVE A MINIMUM VERTICAL CLEARANCE OF 17'–9" FROM ROADWAY TO THE BOTTOM OF LIGHT FIXTURES. ALL LIGHT FIXTURES ARE TO BE AT THE SAME ELEVATION.
   - B) IF THE CONTRACTOR CANNOT OBTAIN 17'–9" (SEE 3A) CLEARANCE, HE IS TO CEASE WORK AND CONTACT THE PROJECT ENGINEER FOR FURTHER INSTRUCTIONS. THE PROJECT ENGINEER MAY CONTACT THE TRAFFIC ENGINEERING DESIGN DIVISION FOR ASSISTANCE.
   - C) ON ALL OVERHEAD SIGNS, THE MINIMUM CLEARANCE TO BOTTOM OF SIGN: 20'–9".

PROJECT REQUIREMENTS

ALL NEW SIGNS ON THIS PROJECT SHALL BE FABRICATED FROM SHEETING WHICH MEETS ALL OF THE FOLLOWING REQUIREMENTS, UNLESS OTHERWISE SPECIFIED IN THE CONTRACT DOCUMENTS, OR AS DIRECTED BY THE ENGINEER:

1. SHEETING SHALL MEET THE REQUIREMENTS OF SECTIONS 813 AND 950.03 OF MDOT SHA'S STANDARD SPECIFICATIONS FOR CONSTRUCTION AND MATERIALS (JULY 2022) AND SUBSEQUENT REVISIONS
2. LISTED ON MDOT SHA OFFICE OF TRAFFIC AND SAFETY'S QUALIFIED PRODUCTS LIST (QPL)

PROJECT REQUIREMENTS CONT'D

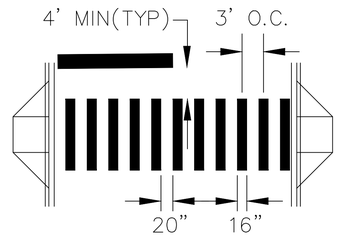
3. THE FOLLOWING TYPES OF SHEETING SHALL BE USED FOR THE SPECIFIED SIGN CLASSIFICATIONS
   - A) GUIDE, EXIT GORE, AND GENERAL INFORMATION SIGNS– RETROREFLECTIVE SHEETING FOR GUIDE SIGNS, EXIT GORE, AND GENERAL INFORMATION (INCLUDES WHITE ON GREEN, WHITE ON BLUE, WHITE ON BROWN AND THE REVERSE OF THESE COLORS) SHALL MEET OR EXCEED THE REQUIREMENTS FOR ASTM TYPE IX LEGEND ON ASTM TYPE IX BACKGROUND. REGULATORY AND WARNING MESSAGES WITHIN GUIDE SIGNS SHALL BE NON–REFLECTIVE BLACK LEGEND ON BACKGROUND SHEETING WHICH MEETS OR EXCEEDS THE REQUIREMENTS FOR ASTM TYPE IX SHEETING.
   - B) WARNING SIGNS – RETROREFLECTIVE SHEETING FOR BLACK ON FLUORESCENT YELLOW WARNING SIGNS SHALL BE NON–REFLECTIVE BLACK LEGEND ON BACKGROUND SHEETING WHICH MEETS OR EXCEEDS THE REQUIREMENTS FOR ASTM TYPE IX SHEETING. REGULATORY MESSAGES WITHIN WARNING SIGNS SHALL FOLLOW THE GUIDELINES FOR REGULATORY SIGNS.
   - C) SCHOOL SIGNS – RETROREFLECTIVE SHEETING FOR SCHOOL SIGNS (BLACK ON FLUORESCENT YELLOW AND BLACK ON FLUORESCENT YELLOW GREEN) SHALL BE NON–REFLECTIVE BLACK LEGEND ON BACKGROUND SHEETING WHICH MEETS OR EXCEEDS THE REQUIREMENTS FOR ASTM TYPE IX SHEETING. REGULATORY MESSAGES WITHIN SCHOOL SIGNS SHALL FOLLOW THE REQUIREMENTS FOR REGULATORY SIGNS.
   - D) REGULATORY SIGNS –FALL INTO THREE SUBCATEGORIES:
     - i. REGULATORY SIGNS (STOP, YIELD, DO NOT ENTER AND WRONG WAY) RETROREFLECTIVE SHEETING FOR THESE SIGNS AND THEIR SUPPLEMENTAL PANELS (INCLUDES WHITE ON RED AND RED ON WHITE) SHALL MEET OR EXCEED THE REQUIREMENTS FOR ASTM TYPE IX SHEETING.
     - ii. ALL R7 AND R8 SERIES PARKING RELATED SIGNS AND THEIR SUPPLEMENTAL PANELS, NO TRESPASSING SIGNS, AND SIGNS DIRECTED AT PEDESTRIANS AND BICYCLISTS ONLY (INCLUDES RED ON WHITE, GREEN ON WHITE, BLUE ON WHITE, BLACK ON WHITE AND THE REVERSE OF THESE COLORS) SHALL BE ASTM TYPE I LEGEND ON ASTM TYPE I BACKGROUND.
     - iii. ALL OTHER REGULATORY SIGNS – RETROREFLECTIVE SHEETING FOR THESE SIGNS AND THEIR SUPPLEMENTAL PANELS (INCLUDES BLACK ON WHITE) SHALL BE NON–REFLECTIVE BLACK LEGEND ON ASTM TYPE IV BACKGROUND. WHERE RED IS SPECIFIED, OR WHERE THE COLOR OF THE SIGN IS WHITE ON BLACK, THE LEGEND SHALL BE ASTM TYPE IV RETROREFLECTIVE SHEETING ON NON–REFLECTIVE BLACK BACKGROUND. WARNING MESSAGES WITHIN REGULATORY SIGNS SHALL FOLLOW THE GUIDELINES FOR WARNING SIGNS.
   - E) ROUTE MARKERS –RETROREFLECTIVE SHEETING FOR ROUTE MARKERS (INCLUDES BLACK ON WHITE , GREEN ON WHITE, WHITE ON GREEN, WHITE ON RED/BLUE) SHALL MEET THE REQUIREMENTS OF GUIDE SIGNS ABOVE WHEN SPECIFIED AS THE LEGEND OF A GUIDE SIGN. RETROREFLECTIVE SHEETING FOR ALL INDEPENDENT ROUTE MARKERS AND THEIR AUXILIARY PANELS SHALL BE ASTM TYPE IV AND/OR NON–REFLECTIVE BLACK LEGEND ON ASTM TYPE IV BACKGROUND.
   - F) LOGOS AND/OR GRAPHICS –WITHIN SIGNS SHALL FOLLOW THE GUIDELINES FOR THE RESPECTIVE SIGN CLASSIFICATION UNLESS OTHERWISE SPECIFIED IN THE CONTRACT DOCUMENTS, OR AS DIRECTED BY THE ENGINEER.
   - G) CIVIL DEFENSE SIGNS AND OTHER SIGNS – NOT SPECIFICALLY FALLING INTO ONE OF THE CATEGORIES ABOVE, SHALL FOLLOW THE GUIDELINES FOR THE SIGN CLASSIFICATION THAT MOST CLOSELY MATCHES THE COLOR(S) OF THE PROPOSED SIGN.

4. THE FOLLOWING MINIMUM THICKNESS SHALL BE USED FOR THE APPROPRIATE WIDTH OF SHEET ALUMINUM BLANKS.

LONGEST DIMENSION	MINIMUM THICKNESS
UP TO 12"	0.040"
GREATER THAN 12" TO 24"	0.063"
GREATER THAN 24" TO 36"	0.080"
GREATER THAN 36" TO 48"	0.100"
OVER 48"	0.125"

NOTE:

20' MINIMUM LENGTH FROM CROSSWALK TO STOPBAR WHEN R1–6A(3) SIGNAGE "STOP HERE FOR PEDESTRIANS" IS UTILIZED – SEE PLANS FOR PLACEMENT.



LADDER BAR CROSSWALK WITH STOPBAR DETAIL

DRAFT
NOT FOR CONSTRUCTION

JMT

NO.	REVISION	DATE	BY

MONTGOMERY COUNTY
DEPARTMENT OF TRANSPORTATION
GAITHERSBURG, MARYLAND

RECOMMENDED FOR APPROVAL

Chief, Design Section — Date

APPROVED

Chief, Division of Transportation Engineering — Date

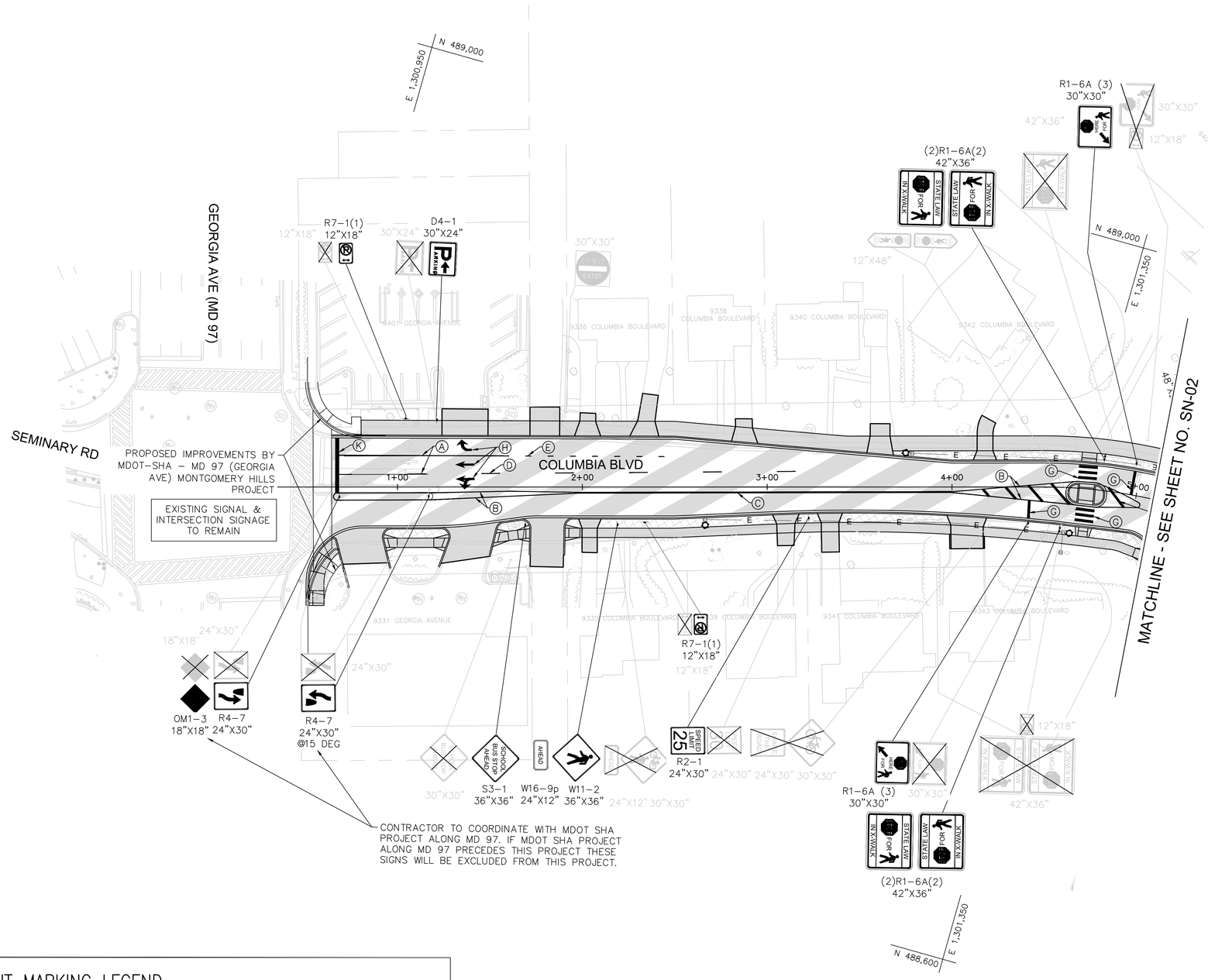
Designed by: MDS Drawn by: MDS Checked by: JMC

SN–00
SIGNING & MARKING NOTES/DETAILS

DALE DRIVE
SHARED USE PATH

DATE: NOVEMBER 2022

CIP No. : 502109 SHEET 59 of 181



CONTRACTOR TO COORDINATE WITH MDOT SHA PROJECT ALONG MD 97. IF MDOT SHA PROJECT ALONG MD 97 PRECEDES THIS PROJECT THESE SIGNS WILL BE EXCLUDED FROM THIS PROJECT.

SIGNING LEGEND

- EXISTING SIGN TO REMAIN
- EXISTING SIGN TO BE REMOVED
- PROPOSED SIGN
- PROPOSED PEDESTRIAN LIGHT (SEE LIGHTING PLANS)

PAVEMENT MARKING LEGEND

- (A) SOLID SINGLE 4" LEAD FREE WHITE REFLECTIVE THERMOPLASTIC PAVEMENT MARKINGS
- (B) SOLID SINGLE 4" LEAD FREE YELLOW REFLECTIVE THERMOPLASTIC PAVEMENT MARKINGS
- (C) SOLID DOUBLE 4" LEAD FREE YELLOW REFLECTIVE THERMOPLASTIC PAVEMENT MARKINGS
- (D) SINGLE WHITE 10' STRIPE 30' SKIP LEAD FREE WHITE REFLECTIVE THERMOPLASTIC PAVEMENT MARKINGS
- (E) SINGLE WHITE 4" 3' STRIPE 9' SKIP LEAD FREE WHITE REFLECTIVE THERMOPLASTIC PAVEMENT MARKINGS
- (F) SOLID SINGLE 12" LEAD FREE WHITE REFLECTIVE THERMOPLASTIC PAVEMENT MARKINGS (RAISED CROSSWALK ARROWS)
- (G) SOLID SINGLE 16" LEAD FREE WHITE REFLECTIVE THERMOPLASTIC PAVEMENT MARKINGS (CROSSWALK / STOP BAR)
- (H) WHITE PREFORMED THERMOPLASTIC PAVEMENT MARKING LEGENDS AND SYMBOLS
- (J) SOLID SINGLE 15" LEAD FREE YELLOW REFLECTIVE THERMOPLASTIC PAVEMENT MARKINGS
- (K) SOLID SINGLE 24" LEAD FREE WHITE REFLECTIVE THERMOPLASTIC PAVEMENT MARKINGS (STOP BAR)

DRAFT
NOT FOR CONSTRUCTION

JMT

NO.	REVISION	DATE	BY

MONTGOMERY COUNTY
DEPARTMENT OF TRANSPORTATION
GAITHERSBURG, MARYLAND

RECOMMENDED FOR APPROVAL

Chief, Design Section — Date

APPROVED

Chief, Division of Transportation Engineering — Date

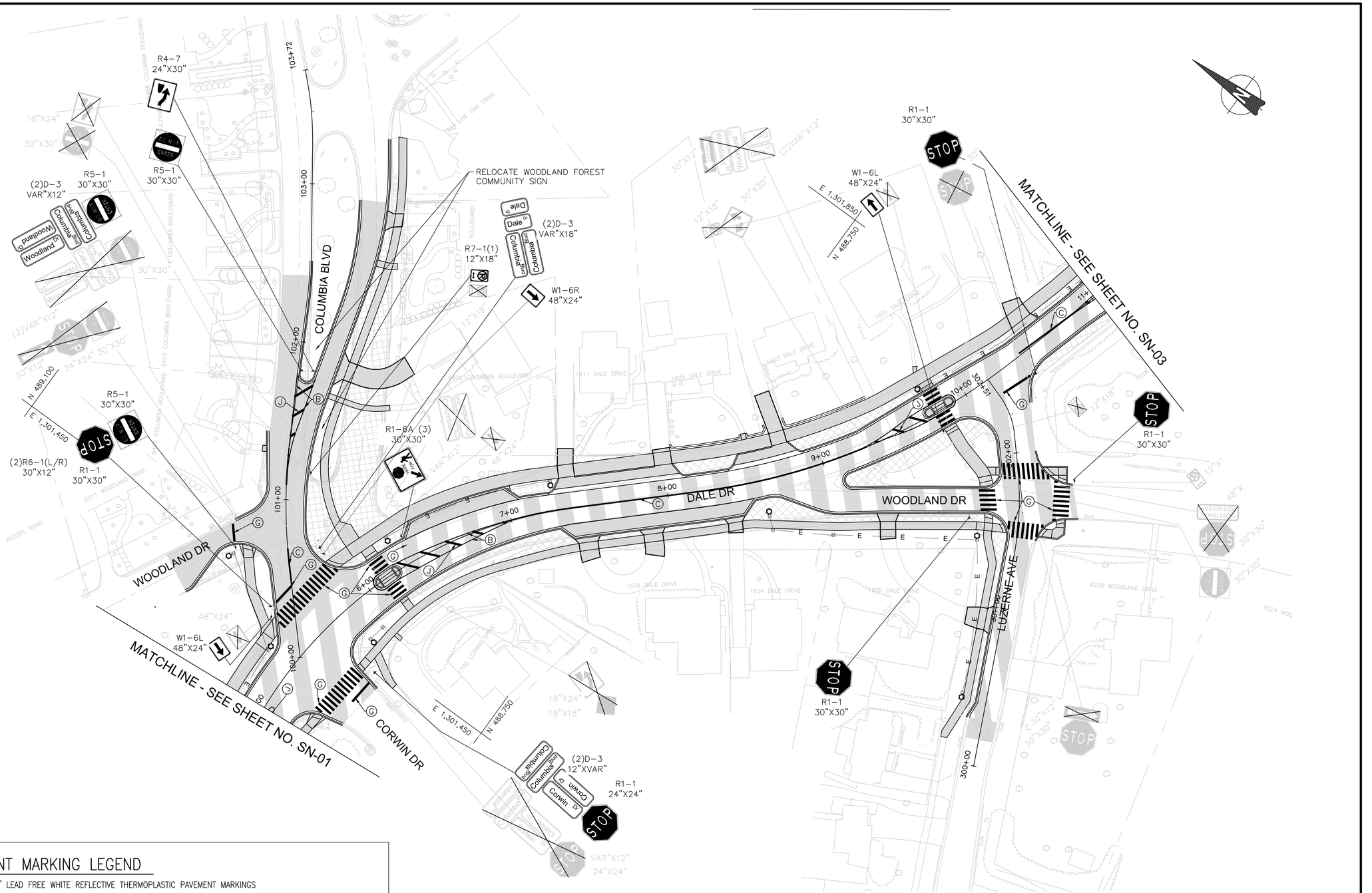
Designed by: MDS Drawn by: MDS Checked by: JMC

SN-01
SIGNING & PAVEMENT MARKING PLAN
DALE DRIVE
SHARED USE PATH

0 30' 60'
SCALE: 1"=30'
DATE: NOVEMBER 2022

CIP No. : 502109
SHEET 60 of 181

FILE NAME: Q:\2018\1804565_001_Dale_Drive_Pedestria\CADD\pSN_Dale.dwg LAYOUT NAME: SN-01 PLOTTED: Wednesday, November 23, 2022 - 11:54am USER: MStraughan



SIGNING LEGEND

- EXISTING SIGN TO REMAIN
- EXISTING SIGN TO BE REMOVED
- PROPOSED SIGN
- PROPOSED PEDESTRIAN LIGHT (SEE LIGHTING PLANS)

PAVEMENT MARKING LEGEND

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- (C) SOLID DOUBLE 4" LEAD FREE YELLOW REFLECTIVE THERMOPLASTIC PAVEMENT MARKINGS
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- (E) SINGLE WHITE 4" 3' STRIPE 9' SKIP LEAD FREE WHITE REFLECTIVE THERMOPLASTIC PAVEMENT MARKINGS
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- (K) SOLID SINGLE 24" LEAD FREE WHITE REFLECTIVE THERMOPLASTIC PAVEMENT MARKINGS (STOP BAR)

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NOT FOR CONSTRUCTION

JMT

NO.	REVISION	DATE	BY

MONTGOMERY COUNTY
DEPARTMENT OF TRANSPORTATION
GAITHERSBURG, MARYLAND

RECOMMENDED FOR APPROVAL

Chief, Design Section — Date

APPROVED

Chief, Division of Transportation Engineering — Date

Designed by: MDS Drawn by: MDS Checked by: JMC

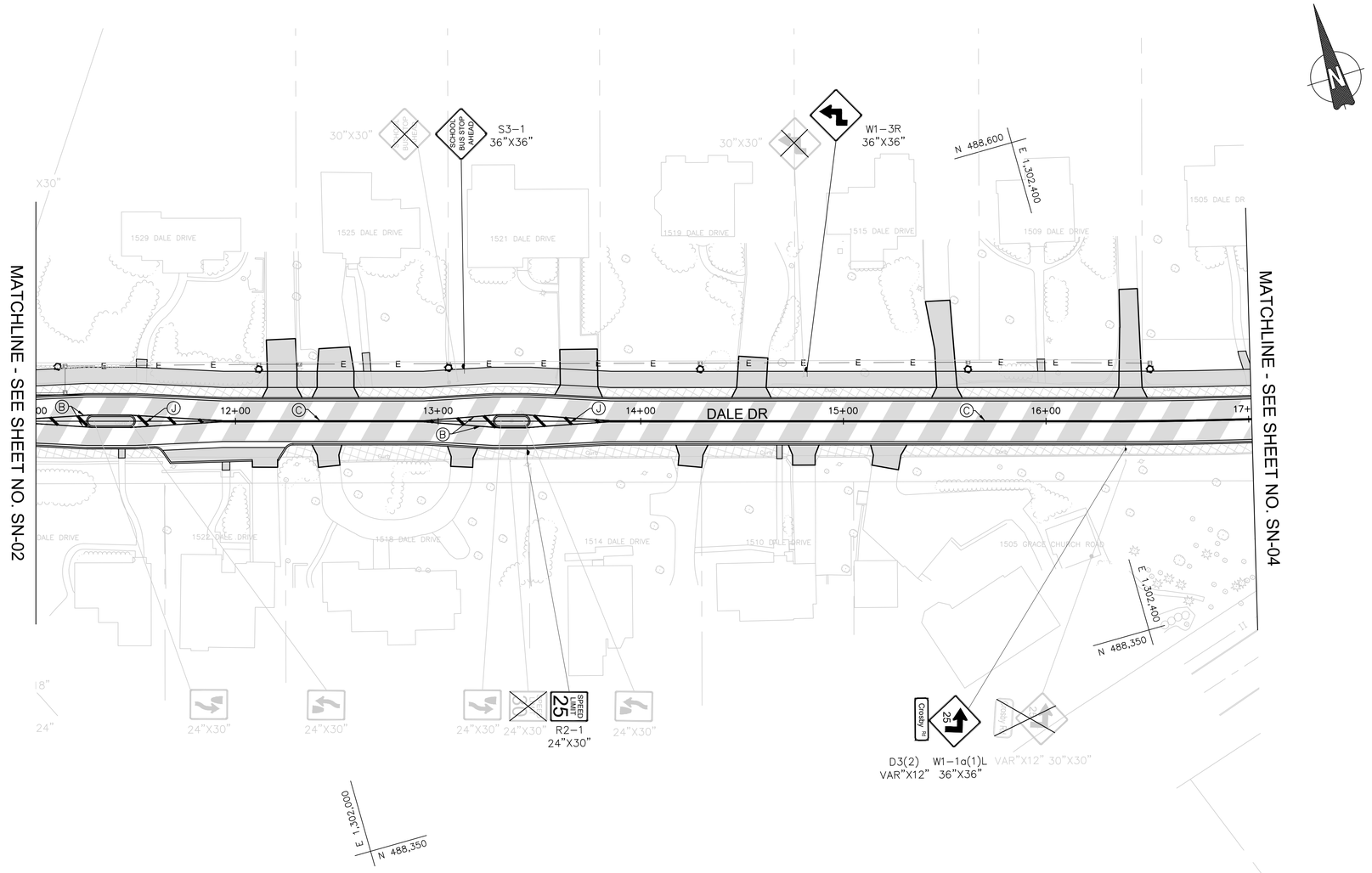
SN-02
SIGNING & PAVEMENT MARKING PLAN
DALE DRIVE SHARED USE PATH

0 30' 60'

SCALE: 1"=30' DATE: NOVEMBER 2022

CIP No.: 502109 SHEET 61 of 181

FILE NAME: Q:\2018\1804565_001_Dale_Drive_Pedestria\CADD\pSN_Dale.dwg LAYOUT NAME: SN-02 PLOTTED: Wednesday, November 23, 2022 - 3:57pm USER: MStraughan



SIGNING LEGEND

- EXISTING SIGN TO REMAIN
- EXISTING SIGN TO BE REMOVED
- PROPOSED SIGN
- PROPOSED PEDESTRIAN LIGHT (SEE LIGHTING PLANS)

PAVEMENT MARKING LEGEND

- (A) SOLID SINGLE 4" LEAD FREE WHITE REFLECTIVE THERMOPLASTIC PAVEMENT MARKINGS
- (B) SOLID SINGLE 4" LEAD FREE YELLOW REFLECTIVE THERMOPLASTIC PAVEMENT MARKINGS
- (C) SOLID DOUBLE 4" LEAD FREE YELLOW REFLECTIVE THERMOPLASTIC PAVEMENT MARKINGS
- (D) SINGLE WHITE 10' STRIPE 30' SKIP LEAD FREE WHITE REFLECTIVE THERMOPLASTIC PAVEMENT MARKINGS
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NOT FOR CONSTRUCTION

NO.	REVISION	DATE	BY

MONTGOMERY COUNTY
DEPARTMENT OF TRANSPORTATION
GAITHERSBURG, MARYLAND

RECOMMENDED FOR APPROVAL

Chief, Design Section — Date

APPROVED

Chief, Division of Transportation Engineering — Date

Designed by: MDS Drawn by: MDS Checked by: JMC

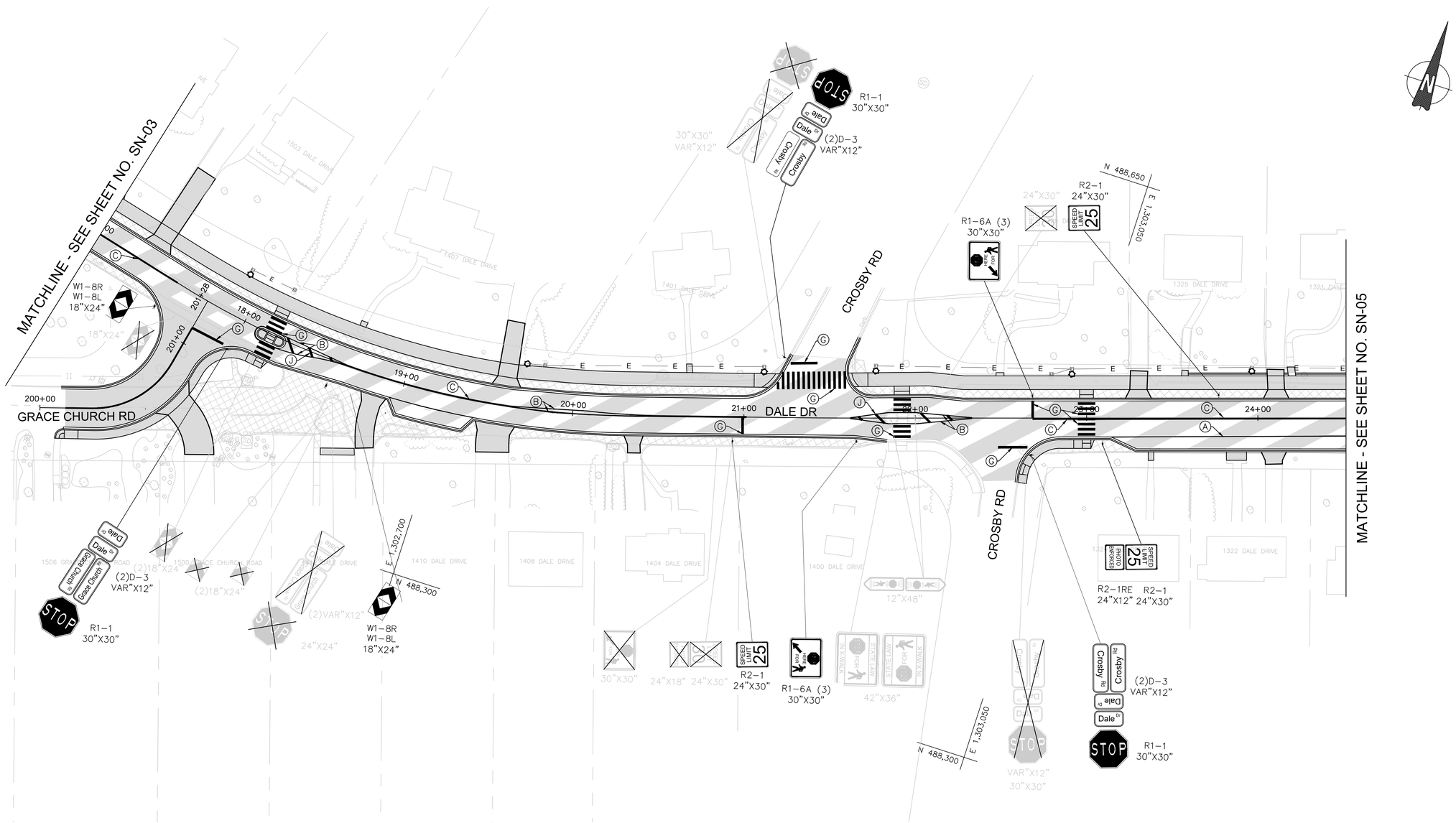
SN-03
SIGNING & PAVEMENT MARKING PLAN
DALE DRIVE SHARED USE PATH

0 30' 60'

SCALE: 1"=30' DATE: NOVEMBER 2022

CIP No. : 502109 SHEET 62 of 181

FILE NAME: Q:\2018\1804565_001_Dale_Drive_Pedestria\CADD\pSN_Dale.dwg LAYOUT NAME: SN-03 PLOTTED: Wednesday, November 23, 2022 - 11:54am USER: MStraughan



SIGNING LEGEND

- EXISTING SIGN TO REMAIN
- EXISTING SIGN TO BE REMOVED
- PROPOSED SIGN
- PROPOSED PEDESTRIAN LIGHT (SEE LIGHTING PLANS)

PAVEMENT MARKING LEGEND

- (A) SOLID SINGLE 4" LEAD FREE WHITE REFLECTIVE THERMOPLASTIC PAVEMENT MARKINGS
- (B) SOLID SINGLE 4" LEAD FREE YELLOW REFLECTIVE THERMOPLASTIC PAVEMENT MARKINGS
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NOT FOR CONSTRUCTION

JMT

NO.	REVISION	DATE	BY

MONTGOMERY COUNTY
DEPARTMENT OF TRANSPORTATION
GAITHERSBURG, MARYLAND

RECOMMENDED FOR APPROVAL

Chief, Design Section — Date

APPROVED

Chief, Division of Transportation Engineering — Date

Designed by: MDS Drawn by: MDS Checked by: JMC

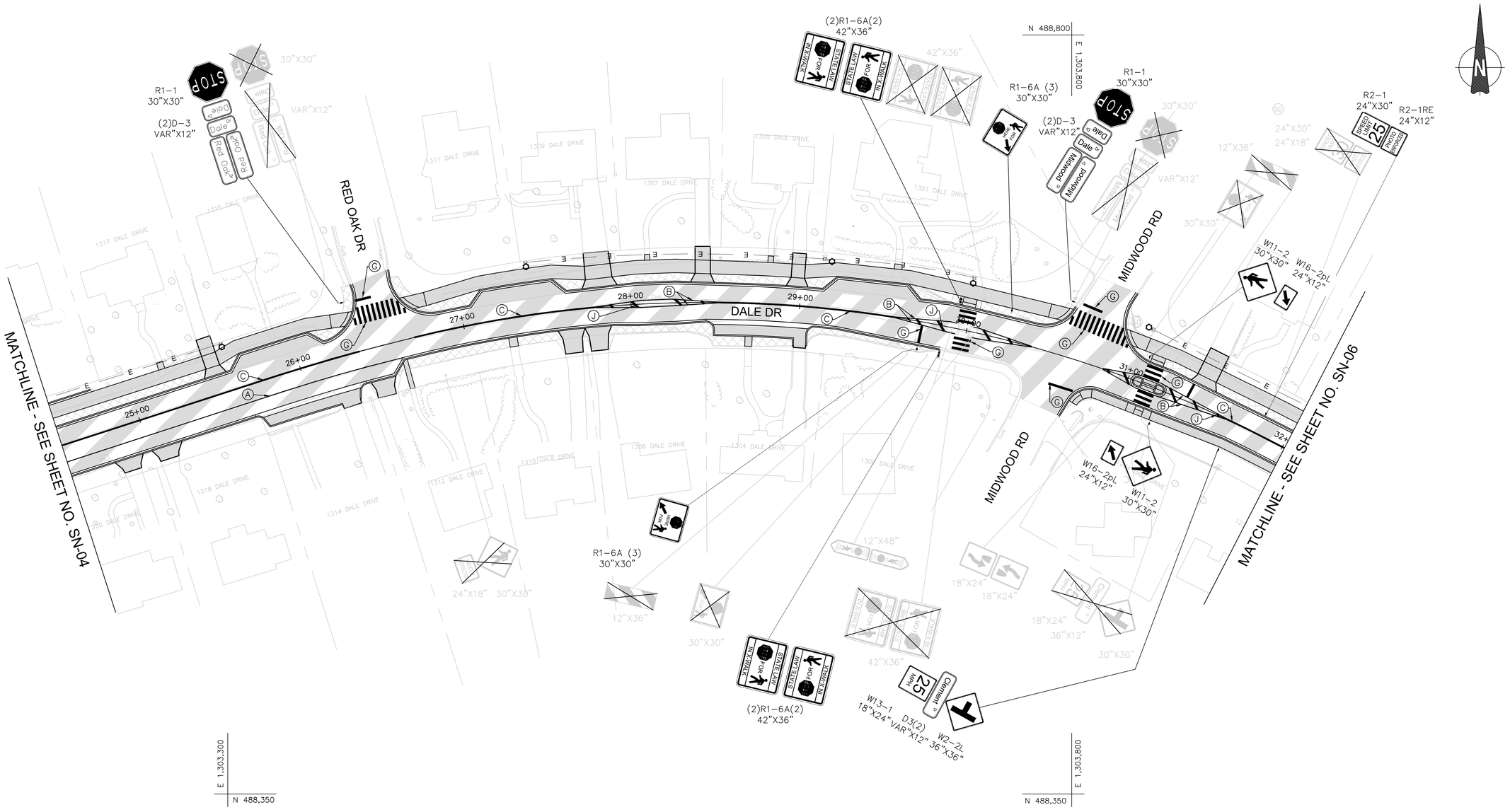
SN–04
SIGNING & PAVEMENT MARKING PLAN
DALE DRIVE SHARED USE PATH

0 30' 60'

SCALE: 1"=30' DATE: NOVEMBER 2022

CIP No. : 502109 SHEET 63 of 181

FILE NAME: Q:\2018\1804565_001_Dale_Drive_Pedestria\CADD\pSN_Dale.dwg LAYOUT NAME: SN–04 PLOTTED: Wednesday, November 23, 2022 – 3:57pm USER: MStraughan



SIGNING LEGEND

- EXISTING SIGN TO REMAIN
- EXISTING SIGN TO BE REMOVED
- PROPOSED SIGN
- PROPOSED PEDESTRIAN LIGHT (SEE LIGHTING PLANS)

PAVEMENT MARKING LEGEND

- (A) SOLID SINGLE 4" LEAD FREE WHITE REFLECTIVE THERMOPLASTIC PAVEMENT MARKINGS
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DRAFT
NOT FOR CONSTRUCTION

JMT

NO.	REVISION	DATE	BY

MONTGOMERY COUNTY
DEPARTMENT OF TRANSPORTATION
GAITHERSBURG, MARYLAND

RECOMMENDED FOR APPROVAL

Chief, Design Section — Date

APPROVED

Chief, Division of Transportation Engineering — Date

Designed by: MDS Drawn by: MDS Checked by: JMC

SN-05
SIGNING & PAVEMENT MARKING PLAN
DALE DRIVE
SHARED USE PATH

0 30' 60'

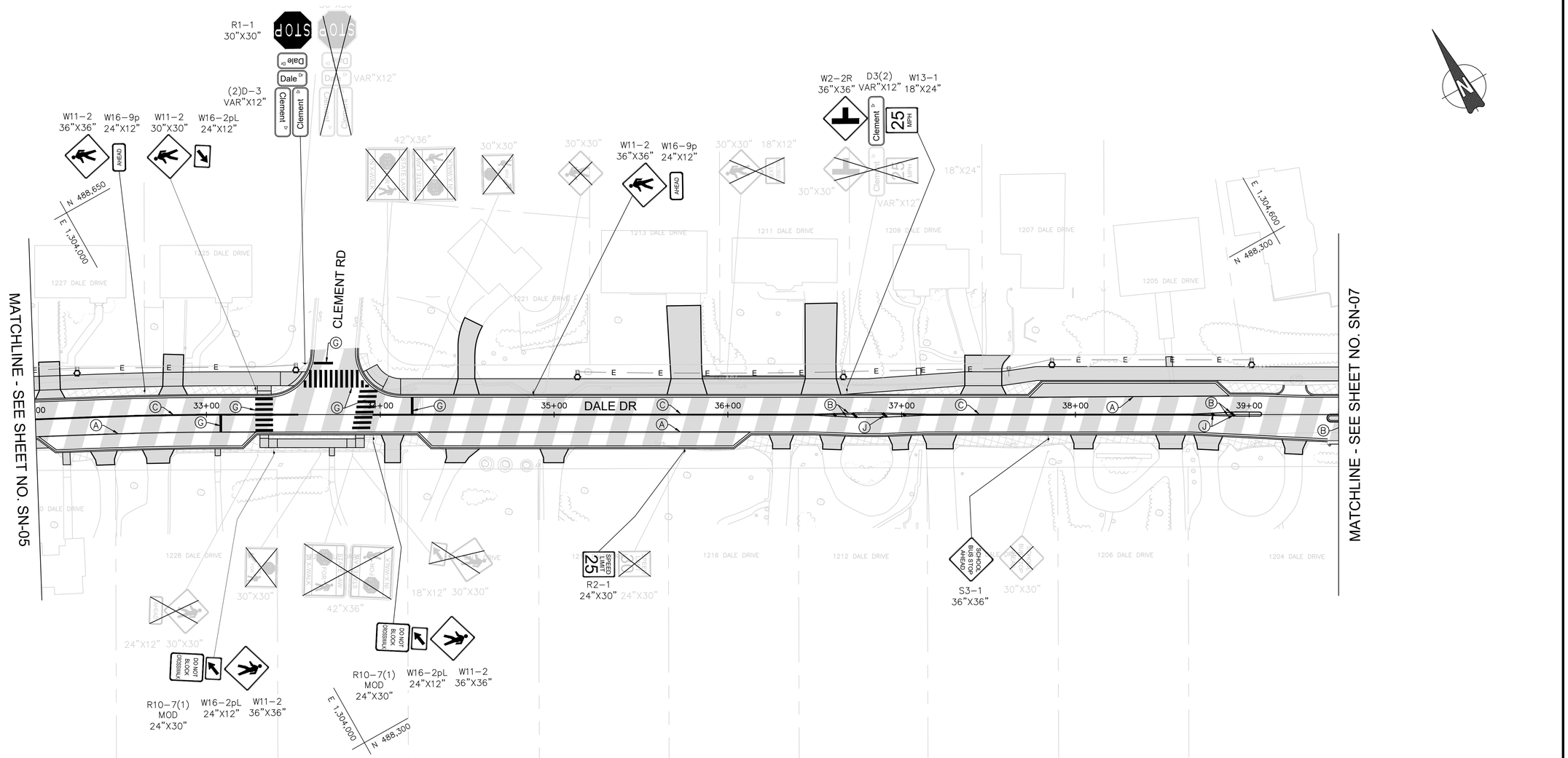
SCALE: 1"=30'

DATE: NOVEMBER 2022

CIP No. : 502109

SHEET 64 of 181

FILE NAME: Q:\2018\1804565_001_Dale_Drive_Pedestria\CADD\pSN_Dale.dwg LAYOUT NAME: SN-05 PLOTTED: Wednesday, November 23, 2022 - 3:58pm USER: MStraughan



SIGNING LEGEND

- EXISTING SIGN TO REMAIN
- EXISTING SIGN TO BE REMOVED
- PROPOSED SIGN
- PROPOSED PEDESTRIAN LIGHT (SEE LIGHTING PLANS)

PAVEMENT MARKING LEGEND

- (A) SOLID SINGLE 4" LEAD FREE WHITE REFLECTIVE THERMOPLASTIC PAVEMENT MARKINGS
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DRAFT
NOT FOR CONSTRUCTION

JMT

NO.	REVISION	DATE	BY

MONTGOMERY COUNTY
DEPARTMENT OF TRANSPORTATION
GAITHERSBURG, MARYLAND

RECOMMENDED FOR APPROVAL

Chief, Design Section — Date

APPROVED

Chief, Division of Transportation Engineering — Date

Designed by: MDS Drawn by: MDS Checked by: JMC

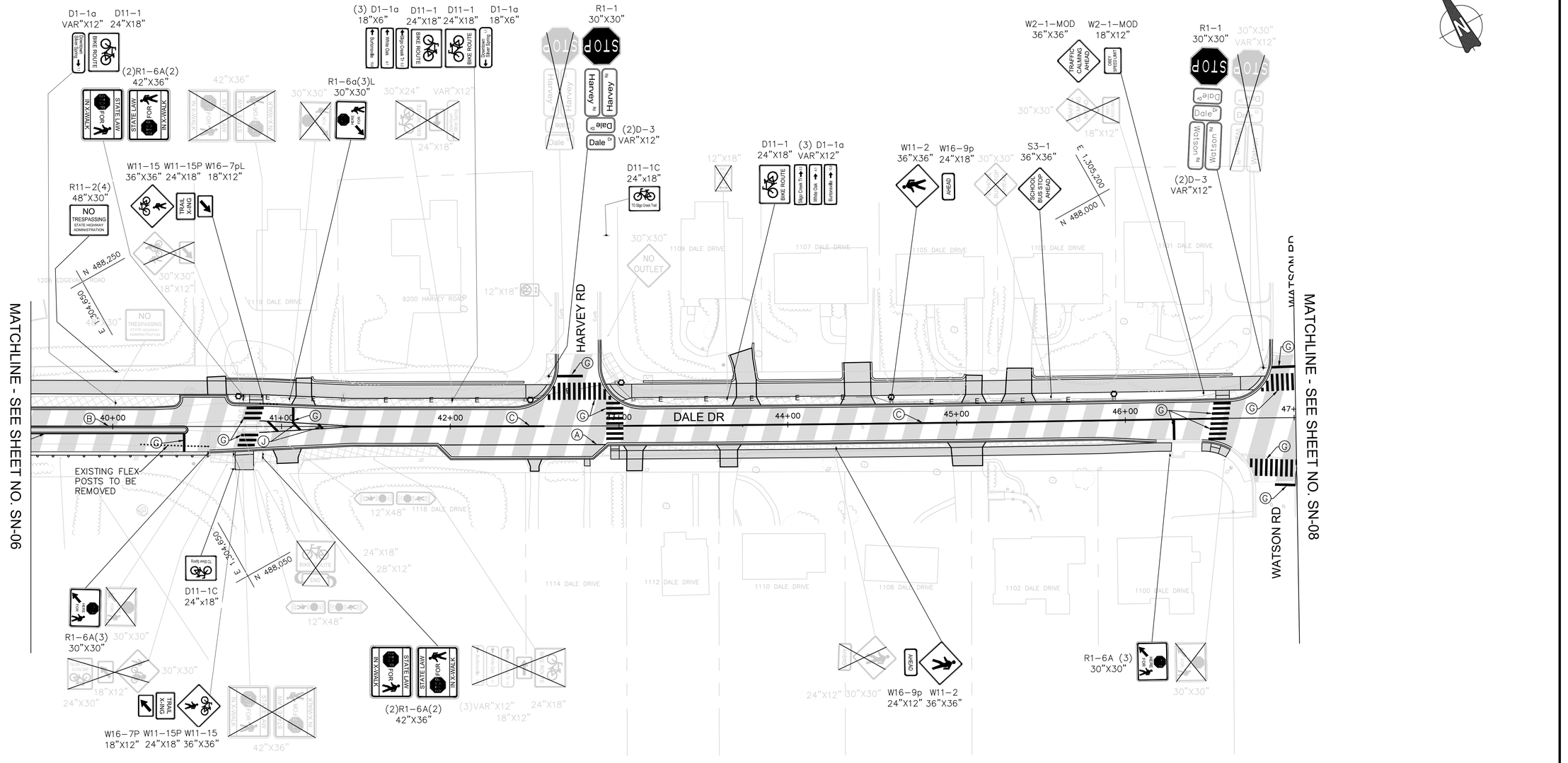
SN-06
SIGNING & PAVEMENT MARKING PLAN
DALE DRIVE SHARED USE PATH

0 30' 60'

SCALE: 1"=30' DATE: NOVEMBER 2022

CIP No. : 502109 SHEET 65 of 181

FILE NAME: Q:\2018\1804565_001_Dale_Drive_Pedestria\CADD\pSN_Dale.dwg LAYOUT NAME: SN-06 PLOTTED: Wednesday, November 23, 2022 - 11:55am USER: MStraughan



SIGNING LEGEND

- EXISTING SIGN TO REMAIN
- EXISTING SIGN TO BE REMOVED
- PROPOSED SIGN
- PROPOSED PEDESTRIAN LIGHT (SEE LIGHTING PLANS)

PAVEMENT MARKING LEGEND

- (A) SOLID SINGLE 4" LEAD FREE WHITE REFLECTIVE THERMOPLASTIC PAVEMENT MARKINGS
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- (H) WHITE PREFORMED THERMOPLASTIC PAVEMENT MARKING LEGENDS AND SYMBOLS
- (J) SOLID SINGLE 15" LEAD FREE YELLOW REFLECTIVE THERMOPLASTIC PAVEMENT MARKINGS
- (K) SOLID SINGLE 24" LEAD FREE WHITE REFLECTIVE THERMOPLASTIC PAVEMENT MARKINGS (STOP BAR)

DRAFT
NOT FOR CONSTRUCTION

JMT

NO.	REVISION	DATE	BY

MONTGOMERY COUNTY
DEPARTMENT OF TRANSPORTATION
GAITHERSBURG, MARYLAND

RECOMMENDED FOR APPROVAL

Chief, Design Section — Date

APPROVED

Chief, Division of Transportation Engineering — Date

Designed by: MDS Drawn by: MDS Checked by: JMC

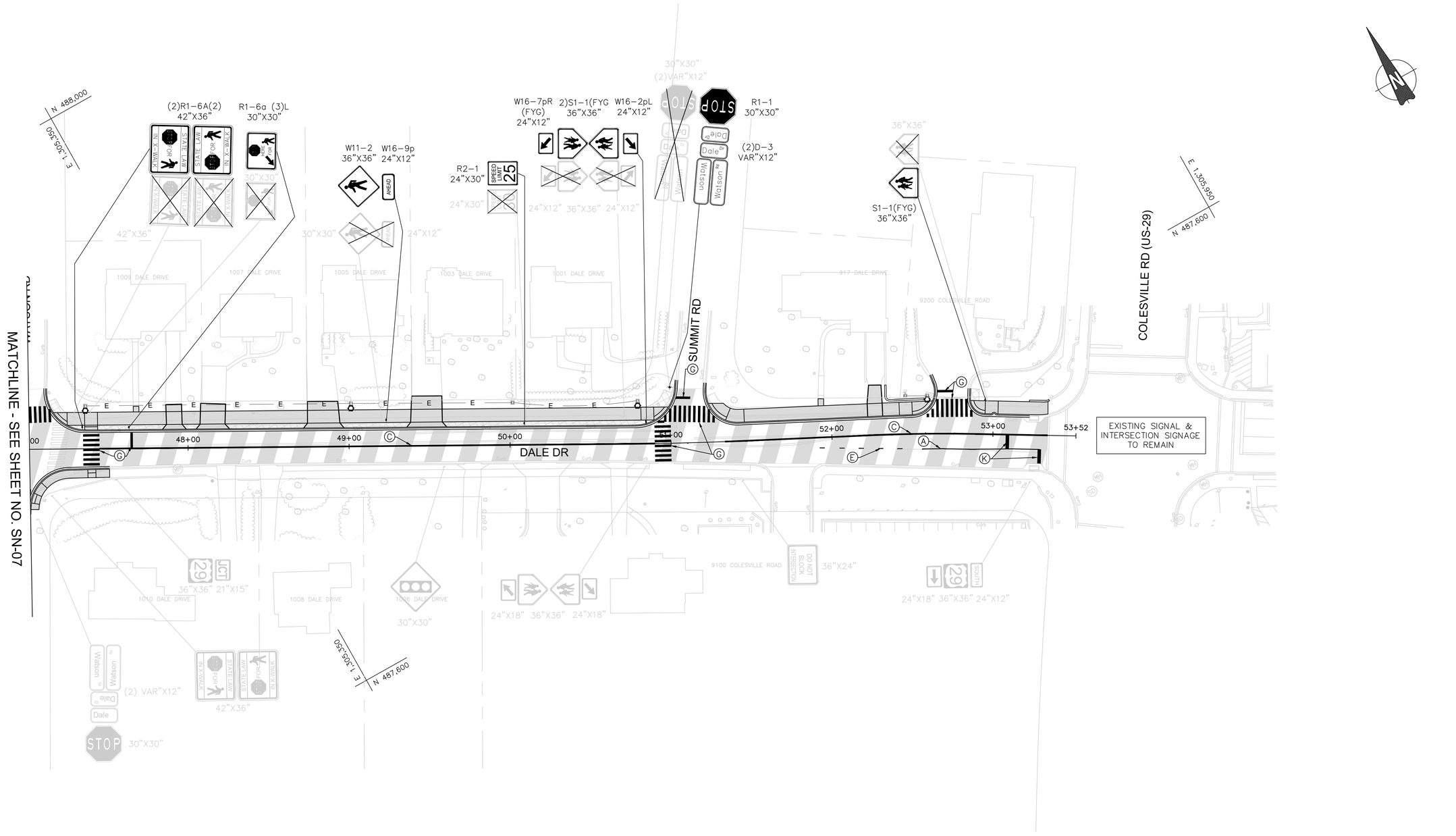
SN-07
SIGNING & PAVEMENT MARKING PLAN
DALE DRIVE SHARED USE PATH

0 30' 60'

SCALE: 1"=30' DATE: NOVEMBER 2022

CIP No.: 502109 SHEET 66 of 181

FILE NAME: Q:\2018\1804565_001_Dale_Drive_Pedestria\CADD\pSN_Dale.dwg LAYOUT NAME: SN-07 PLOTTED: Wednesday, November 23, 2022 - 3:58pm USER: MStraughan



SIGNING LEGEND

- EXISTING SIGN TO REMAIN
- EXISTING SIGN TO BE REMOVED
- PROPOSED SIGN
- PROPOSED PEDESTRIAN LIGHT (SEE LIGHTING PLANS)

PAVEMENT MARKING LEGEND

- (A) SOLID SINGLE 4" LEAD FREE WHITE REFLECTIVE THERMOPLASTIC PAVEMENT MARKINGS
- (B) SOLID SINGLE 4" LEAD FREE YELLOW REFLECTIVE THERMOPLASTIC PAVEMENT MARKINGS
- (C) SOLID DOUBLE 4" LEAD FREE YELLOW REFLECTIVE THERMOPLASTIC PAVEMENT MARKINGS
- (D) SINGLE WHITE 10' STRIPE 30' SKIP LEAD FREE WHITE REFLECTIVE THERMOPLASTIC PAVEMENT MARKINGS
- (E) SINGLE WHITE 4" 3' STRIPE 9' SKIP LEAD FREE WHITE REFLECTIVE THERMOPLASTIC PAVEMENT MARKINGS
- (F) SOLID SINGLE 12" LEAD FREE WHITE REFLECTIVE THERMOPLASTIC PAVEMENT MARKINGS (RAISED CROSSWALK ARROWS)
- (G) SOLID SINGLE 16" LEAD FREE WHITE REFLECTIVE THERMOPLASTIC PAVEMENT MARKINGS (CROSSWALK / STOP BAR)
- (H) WHITE PREFORMED THERMOPLASTIC PAVEMENT MARKING LEGENDS AND SYMBOLS
- (J) SOLID SINGLE 15" LEAD FREE YELLOW REFLECTIVE THERMOPLASTIC PAVEMENT MARKINGS
- (K) SOLID SINGLE 24" LEAD FREE WHITE REFLECTIVE THERMOPLASTIC PAVEMENT MARKINGS (STOP BAR)

DRAFT
NOT FOR CONSTRUCTION

JMT

NO.	REVISION	DATE	BY

MONTGOMERY COUNTY
DEPARTMENT OF TRANSPORTATION
GAITHERSBURG, MARYLAND

RECOMMENDED FOR APPROVAL

Chief, Design Section — Date

APPROVED

Chief, Division of Transportation Engineering — Date

Designed by: MDS Drawn by: MDS Checked by: JMC

SN-08
SIGNING & PAVEMENT MARKING PLAN
DALE DRIVE SHARED USE PATH

0 30' 60'

SCALE: 1"=30'

DATE: NOVEMBER 2022

CIP No. : 502109

SHEET 67 of 181

FILE NAME: Q:\2018\1804565_001_Dale_Drive_Pedestria\CADD\pSN_Dale.dwg LAYOUT NAME: SN-08 PLOTTED: Wednesday, November 23, 2022 - 11:56am USER: MStraughan

SHEET	REMARKS	LINEAR FEET
SN-01		
	4 INCH WHITE THERMOPLASTIC	188
	4 INCH YELLOW THERMOPLASTIC	871
	12 INCH WHITE THERMOPLASTIC	
	15 INCH YELLOW THERMOPLASTIC	337
	16 INCH WHITE THERMOPLASTIC	83
	24 INCH WHITE THERMOPLASTIC	30
SN-02		
	4 INCH WHITE THERMOPLASTIC	
	4 INCH YELLOW THERMOPLASTIC	1061
	12 INCH WHITE THERMOPLASTIC	
	15 INCH YELLOW THERMOPLASTIC	97
	16 INCH WHITE THERMOPLASTIC	2753
SN-03		
	4 INCH WHITE THERMOPLASTIC	
	4 INCH YELLOW THERMOPLASTIC	1115
	12 INCH WHITE THERMOPLASTIC	
	15 INCH YELLOW THERMOPLASTIC	56
	16 INCH WHITE THERMOPLASTIC	
SN-04		
	4 INCH WHITE THERMOPLASTIC	186
	4 INCH YELLOW THERMOPLASTIC	1077
	12 INCH WHITE THERMOPLASTIC	
	15 INCH YELLOW THERMOPLASTIC	41
	16 INCH WHITE THERMOPLASTIC	397
SN-05		
	4 INCH WHITE THERMOPLASTIC	210
	4 INCH YELLOW THERMOPLASTIC	1329
	12 INCH WHITE THERMOPLASTIC	
	15 INCH YELLOW THERMOPLASTIC	64
	16 INCH WHITE THERMOPLASTIC	387
SN-06		
	4 INCH WHITE THERMOPLASTIC	410
	4 INCH YELLOW THERMOPLASTIC	1320
	12 INCH WHITE THERMOPLASTIC	
	15 INCH YELLOW THERMOPLASTIC	35
	16 INCH WHITE THERMOPLASTIC	432
SN-07		
	4 INCH WHITE THERMOPLASTIC	98
	4 INCH YELLOW THERMOPLASTIC	1223
	12 INCH WHITE THERMOPLASTIC	
	15 INCH YELLOW THERMOPLASTIC	19
	16 INCH WHITE THERMOPLASTIC	364
SN-08		
	4 INCH WHITE THERMOPLASTIC	88
	4 INCH YELLOW THERMOPLASTIC	1090
	12 INCH WHITE THERMOPLASTIC	
	15 INCH YELLOW THERMOPLASTIC	358
	16 INCH WHITE THERMOPLASTIC	20
TOTALS		
	4 INCH WHITE THERMOPLASTIC	1180
	4 INCH YELLOW THERMOPLASTIC	9086
	12 INCH WHITE THERMOPLASTIC	
	15 INCH YELLOW THERMOPLASTIC	337
	16 INCH WHITE THERMOPLASTIC	2753
	24 INCH WHITE THERMOPLASTIC	50

SHEET	REMARKS	SUPPORTS	SHEET ALUMINUM SIGN (SF)
SN-01			
	R7-11(1) (12"X18")	SINGLE SQUARE TUBULAR	1.5
	D4-1 (30"X24")	SINGLE SQUARE TUBULAR	5
	R1-6A(2) (42"X36")	DOUBLE SQUARE TUBULAR	10.5
	R1-6A(2) (42"X36")		10.5
	R1-6A(3) (30"X30")	SINGLE SQUARE TUBULAR	6.25
	R4-7 (24"X30")	SINGLE SQUARE TUBULAR	5
	OM1-3 (18"X18")		2.25
	R4-7 (24"X30")	SINGLE SQUARE TUBULAR	6.25
	R4-7 (24"X30")	SINGLE SQUARE TUBULAR	6.25
	S3-1 (36"X36")	SINGLE SQUARE TUBULAR	9
	W16-9 (12"X24")	SINGLE SQUARE TUBULAR	2
	W11-2 (36"X36")	SINGLE SQUARE TUBULAR	6.25
	R2-1 (24"X30")	SINGLE SQUARE TUBULAR	5
	R7-1(1) (12"x18")	SINGLE SQUARE TUBULAR	1.5
	R1-6A(2) (42"X36")	DOUBLE SQUARE TUBULAR	10
	R1-6A(2) (42"X36")		10
	R1-6A(3) (30"X30")	SINGLE SQUARE TUBULAR	5
SN-02			
	R1-1 (30"X30")	SINGLE SQUARE TUBULAR	6.25
	R5-1 (30"X30")	SINGLE SQUARE TUBULAR	6.25
	R5-1 (30"x30")	SINGLE SQUARE TUBULAR	6.25
	D-3 (12"X VAR)		3
	D-3 (12"X VAR)		3
	R4-7 (24"X30")	SINGLE SQUARE TUBULAR	5
	R5-1 (30"X30")		6.25
	R7-1(1)(12"x18")	SINGLE SQUARE TUBULAR	1.5
	W1-6R (48"X24")	SINGLE SQUARE TUBULAR	8
	D-3 (VAR"X12")	SINGLE SQUARE TUBULAR	4
	D-3 (VAR"X12")		4
	W1-6L (48"X24")	SINGLE SQUARE TUBULAR	4
	R1-1 (30"X30")	SINGLE SQUARE TUBULAR	6.25
	R1-1 (30"X30")	SINGLE SQUARE TUBULAR	6.25
	D-3 (VAR"X12")		4
	D-3 (VAR"X12")		4
	R1-1 (30"X30")	SINGLE SQUARE TUBULAR	6.25
	R1-1 (30"X30")	SINGLE SQUARE TUBULAR	6.25
	W1-6L (48"X24")	SINGLE SQUARE TUBULAR	4
	R1-1 (30"X30")	SINGLE SQUARE TUBULAR	6.25
	R1-1 (30"X30")	SINGLE SQUARE TUBULAR	6.25
SN-03			
	S3-1 (36"X36")	SINGLE SQUARE TUBULAR	9
	W1-3R (36"X36")	SINGLE SQUARE TUBULAR	9
	R2-1 (24"X30")	SINGLE SQUARE TUBULAR	5
	W1-1a(1)L (36"X36")	SINGLE SQUARE TUBULAR	9
	D1-1 (VAR"X12")		4
SN-04			
	R1-1 (30"X30")	SINGLE SQUARE TUBULAR	6.25
	D-3 (12"X VAR)		4
	D-3 (12"X VAR)		4
	R1-6A (3) (30"X30")	SINGLE SQUARE TUBULAR	6.25
	R2-1 (24"X30")	SINGLE SQUARE TUBULAR	5
	W1-8R (18"X24")	SINGLE SQUARE TUBULAR	3
	W1-8L (18"X24")		3
	R1-1 (30"X30")	SINGLE SQUARE TUBULAR	6.25
	D-3 (12"X VAR)		4
	D-3 (12"X VAR)		4
	W1-8R (18"X24")	SINGLE SQUARE TUBULAR	3
	W1-8L (18"X24")	SINGLE SQUARE TUBULAR	3
	R2-1 (24"X30")	SINGLE SQUARE TUBULAR	5
	R1-6A(3) (30"X30")	SINGLE SQUARE TUBULAR	6.25
	R1-1 (30"X30")	SINGLE SQUARE TUBULAR	6.25
	D-3 (VAR"X12")		4
	D-3 (VAR"X12")		4
	R2-1 (24"X30")	SINGLE SQUARE TUBULAR	5
	R2-1RE (24"X12")		2

SHEET	REMARKS	SUPPORTS	SHEET ALUMINUM SIGN (SF)
SN-05			
	R1-1 (30"X30")	SINGLE SQUARE TUBULAR	6.25
	D-3 (VAR"X12")		4
	D-3 (VAR"X12")		4
	R1-6A(2) (42"X36")	DOUBLE SQUARE TUBULAR	10.5
	R1-6A(2) (42"X36")		10.5
	R1-6A(3) (30"X30")	SINGLE SQUARE TUBULAR	6.25
	R1-1 (30"X30")	SINGLE SQUARE TUBULAR	6.25
	D-3 (VAR"X12")		4
	D-3 (VAR"X12")		4
	R2-1 (24"x30")	SINGLE SQUARE TUBULAR	5
	R2-1RE (12"X24")		2
	W11-2 (30"X30")	SINGLE SQUARE TUBULAR	6.25
	W16-2pL (24"x12")		2
	R1-6A(3) (30"X30")	SINGLE SQUARE TUBULAR	6.25
	R1-6A(2) (42"X36")	DOUBLE SQUARE TUBULAR	10.5
	R1-6A(2) (42"X36")		10.5
	W2-2L (30"X30")	SINGLE SQUARE TUBULAR	6.25
	D1-1 (VAR"X12")		4
	W11-2 (36"X36")	SINGLE SQUARE TUBULAR	9
	W11-2 (36"X36")	SINGLE SQUARE TUBULAR	9
	W16-2pL (24"X12")		2
SN-06			
	W11-2 (36"X36")	SINGLE SQUARE TUBULAR	9
	W16-9p (24"X12")		2
	W11-2 (36"X36")	SINGLE SQUARE TUBULAR	9
	W16-9pL (24"X12")		2
	R1-1 (30"X30")	SINGLE SQUARE TUBULAR	6.25
	D-3 (VAR"X12")		4
	D-3 (VAR"X12")		4
	W11-2 (36"X36")	SINGLE SQUARE TUBULAR	9
	W16-9p(MOD) (24"X18")		3
	W2-2R (36"X36")	SINGLE SQUARE TUBULAR	9
	D3(2) (VAR"X12")		4
	W13-1 (18"X24")		3
	W11-2(36"X36")	SINGLE SQUARE TUBULAR	9
	W16-2pL (24"X12")		2
	W10-7(1)MOD (24"X30")		5
	W11-2(36"X36")	SINGLE SQUARE TUBULAR	9
	W16-2pL (24"X12")		2
	W10-7(1)MOD (24"X30")		5
	R2-1 (24"X30")	SINGLE SQUARE TUBULAR	5
	S3-1 (36"X36")	SINGLE SQUARE TUBULAR	9

SHEET	REMARKS	SUPPORTS	SHEET ALUMINUM SIGN (SF)
SN-07			
	D11-1 (18"X24")	SINGLE SQUARE TUBULAR	3
	D1-1a (18"X VAR)		2
	R1-6A(2) (42"X36")	DOUBLE SQUARE TUBULAR	10.5
	R1-6A(2) (42"X36")		10.5
	W11-15 (36"X36")	SINGLE SQUARE TUBULAR	9
	W11-15P (18"X24")		3
	W16-7P (12"X18")		1.5
	R11-2(4) (48"X30")	DOUBLE SQUARE TUBULAR	10
	R1-6A(3) (30"X30")	SINGLE SQUARE TUBULAR	6.25
	D11-1 (24"X18")	SINGLE SQUARE TUBULAR	3
	D1-1a (VAR"X12")		2
	D1-1a (VAR"X12")		2
	D1-1a (VAR"X12")		2
	D11-1 (24"X18")	SINGLE SQUARE TUBULAR	3
	D1-1a (VAR"X12")		2
	R1-1 (30"X30")	SINGLE SQUARE TUBULAR	6.25
	D-3 (VAR"X12")		4
	D-3 (VAR"X12")		4
	D11-1C (24"X18")	SINGLE SQUARE TUBULAR	3
	D11-1 (24"X18)	SINGLE SQUARE TUBULAR	3
	D1-1a (VAR"X12")		2
	D1-1a (VAR"X12")		2
	D1-1a (VAR"X12")		2
	W11-2 (36"X36")	SINGLE SQUARE TUBULAR	9
	W16-9 (24"X12")		2
	S3-1 (36"X36")	SINGLE SQUARE TUBULAR	9
	W2-1-MOD (36"X36")	SINGLE SQUARE TUBULAR	9
	W2-1-MOD (18"X12")		1.5
	R1-1 (24"X24")	SINGLE SQUARE TUBULAR	4
	D-3 (12"X VAR)		1.5
	D-3 (12"x VAR)		1.5
	R1-6A(3) (24"X30")	SINGLE SQUARE TUBULAR	5
	W11-15 (30"X30")	SINGLE SQUARE TUBULAR	6.25
	W11-15P (24"X18")		3
	W16-7P (12"X18")		1.5
	D11-1C (18"X24")	SINGLE SQUARE TUBULAR	3
	R1-6A(2) (42"X36")	DOUBLE SQUARE TUBULAR	10.5
	R1-6A(2) (42"X36")		10.5
	W11-2 (36"X36")	SINGLE SQUARE TUBULAR	9
	W16-9p (MOD) (24"X18")		3
	R1-6A(3) (30"X30")	SINGLE SQUARE TUBULAR	6.25
SN-08			
	R1-6A(2) (42"X36")	DOUBLE SQUARE TUBULAR	10.5
	R1-6A(2) (42"X36")		10.5
	R1-6A(3) (30"X30")	SINGLE SQUARE TUBULAR	6.25
	W11-2 (36"X36")	SINGLE SQUARE TUBULAR	9
	W16-9 (24"X12")		2
	R2-1 (18"X12")	SINGLE SQUARE TUBULAR	1.5
	S2-1 (36"X36")	SINGLE SQUARE TUBULAR	9
	W6-2R (18"X12")		1.5
	S2-1 (36"X36")		9
	W6-2L (18"X12")		1.5
	R1-1 (24"X24")	SINGLE SQUARE TUBULAR	4
	D-3 (VAR"X12")		4
	D-3 (VAR"X12")		4
	S2-1 (36"X36")	SINGLE SQUARE TUBULAR	9
TOTAL			842

DRAFT
NOT FOR CONSTRUCTION

NO.	REVISION	DATE	BY

MONTGOMERY COUNTY
DEPARTMENT OF TRANSPORTATION
GAITHERSBURG, MARYLAND

RECOMMENDED FOR APPROVAL

Chief, Design Section — Date

APPROVED

Chief, Division of Transportation Engineering — Date

Designed by: MDS Drawn by: MDS Checked by: JMC

SN-09
SIGNING & MARKING QUANTITIES
DALE DRIVE
SHARED USE PATH

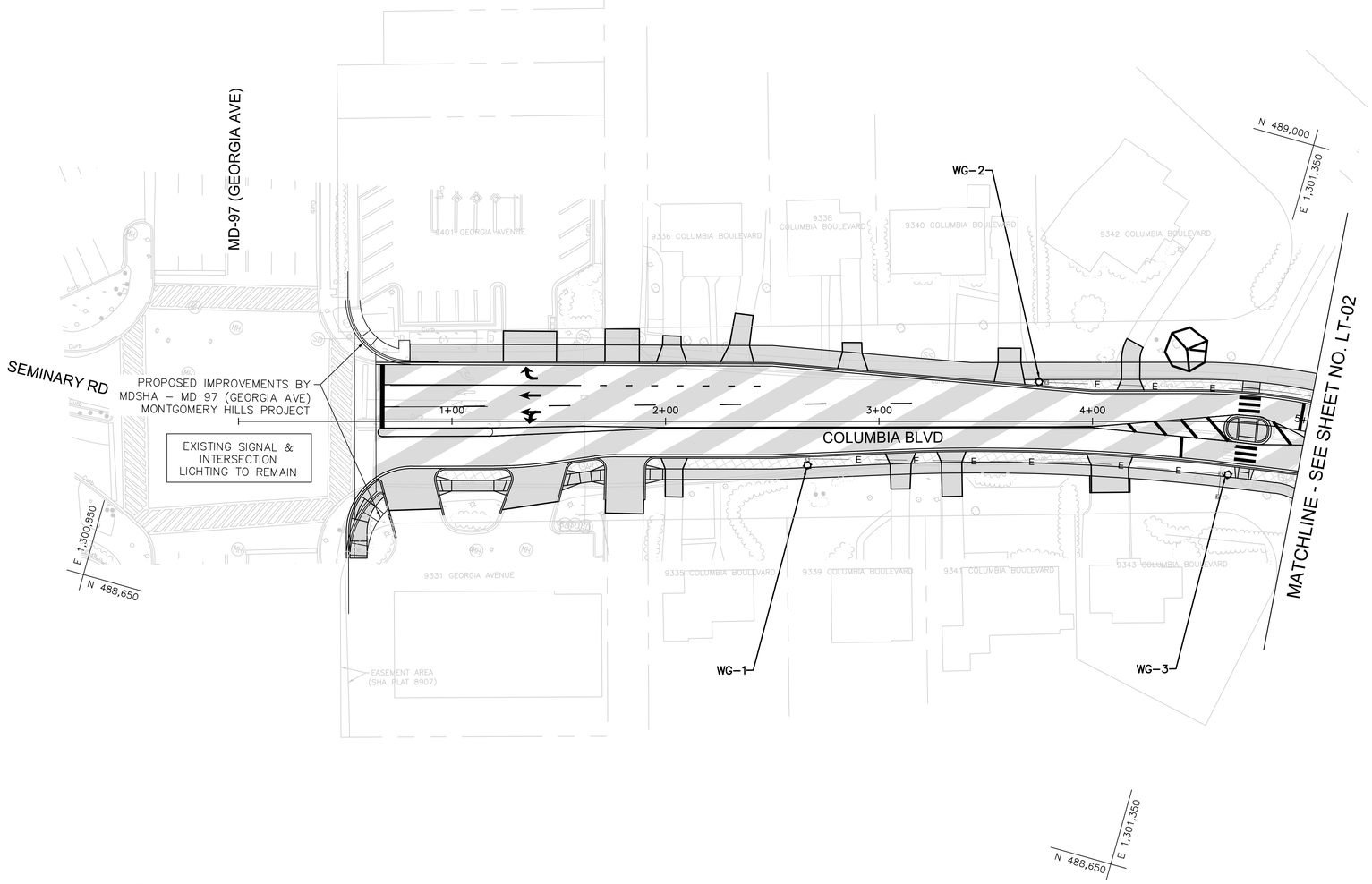
DATE: NOVEMBER 2022

CIP No. : 502109 SHEET 68 of 181

POLE #	STATION	OFFSET	NORTHING	EASTING	STREET NAME	WATTAGE	LAMP TYPE	LUMINAIRE STYLE	POLE STYLE
WG–1	2+66.50	20.67' RT	488791.28	1301162.54	COLUMBIA BLVD	70	LED	PROPOSED WASHINGTON GLOBE	12" CAST ALUMINUM
WG–2	3+75	18.50' LT	488858.42	1301256.34	COLUMBIA BLVD	70	LED	PROPOSED WASHINGTON GLOBE	12" CAST ALUMINUM
WG–3	4+65	24.61' RT	488840.51	1301353.28	COLUMBIA BLVD	70	LED	PROPOSED WASHINGTON GLOBE	12" CAST ALUMINUM

LIGHTING NOTES:

1. EXISTING LEASE LIGHTING AND PENDANT POST STREET LIGHT POLES TO REMAIN.
2. PROPOSED LIGHT POLES TO BE CABLED AND POWERED BY PEPCO.
3. ALL PROPOSED LIGHTING SHALL INCORPORATE LED LUMINAIRES.
4. FOUNDATION OF DECORATIVE LAMP POST SHALL BE 4.5' IN HEIGHT AND 2' IN DIAMETER PER SPECIFICATIONS FOR STREETLIGHT HARDWARE.
5. SEE LANDSCAPING PLANS FOR EXISTING TREES TO BE REMOVED.
6. CONTRACTOR TO PROVIDE LIGHT POLES, FOUNDATIONS, FIXTURES, HANDHOLES, AND CONDUIT FOR PEDESTRIAN LIGHTING. PEPCO TO RUN WIRING FROM SOURCE POLES AND SPLICE INTO PROVIDED POLES / LUMINAIRES AT LOCATIONS NOTED ON PLANS.
7. CONDUIT TO BE DIRECT BURIED AND CONCRETE ENCASED WHEN LOCATED BENEATH PAVEMENT.
8. SEE DWG LT–11 FOR PEPCO CONDITIONS.



E 1,301,350
N 488,650

LIGHTING LEGEND

- PROPOSED LED WASHINGTON GLOBE PEDESTRIAN LIGHT POLE
- EXISTING LIGHT & POLE TO REMAIN
- PROPOSED LED LIGHT ON POWER POLE
- EXISTING LIGHT ON POWER POLE TO REMAIN
- XXX POLE NUMBER
- E1 12" x 24" HANDHOLE
- E2 17" x 30" HANDHOLE
- E (2) 4" SCHEDULE 40 PVC CONDUIT
- PROPOSED TREE (ULTIMATE CANOPY)
- PROPOSED TREE (ULTIMATE CANOPY)
- EXISTING TREE

DRAFT
NOT FOR CONSTRUCTION

JMT

NO.	REVISION	DATE	BY

MONTGOMERY COUNTY
DEPARTMENT OF TRANSPORTATION
GAITHERSBURG, MARYLAND

RECOMMENDED FOR APPROVAL

Chief, Design Section — Date

APPROVED

Chief, Division of Transportation Engineering — Date

Designed by: MDS Drawn by: MDS Checked by: JMC

LT–01
LIGHTING PLAN
DALE DRIVE SHARED USE PATH

0 30' 60'

SCALE: 1"=30' DATE: NOVEMBER 2022

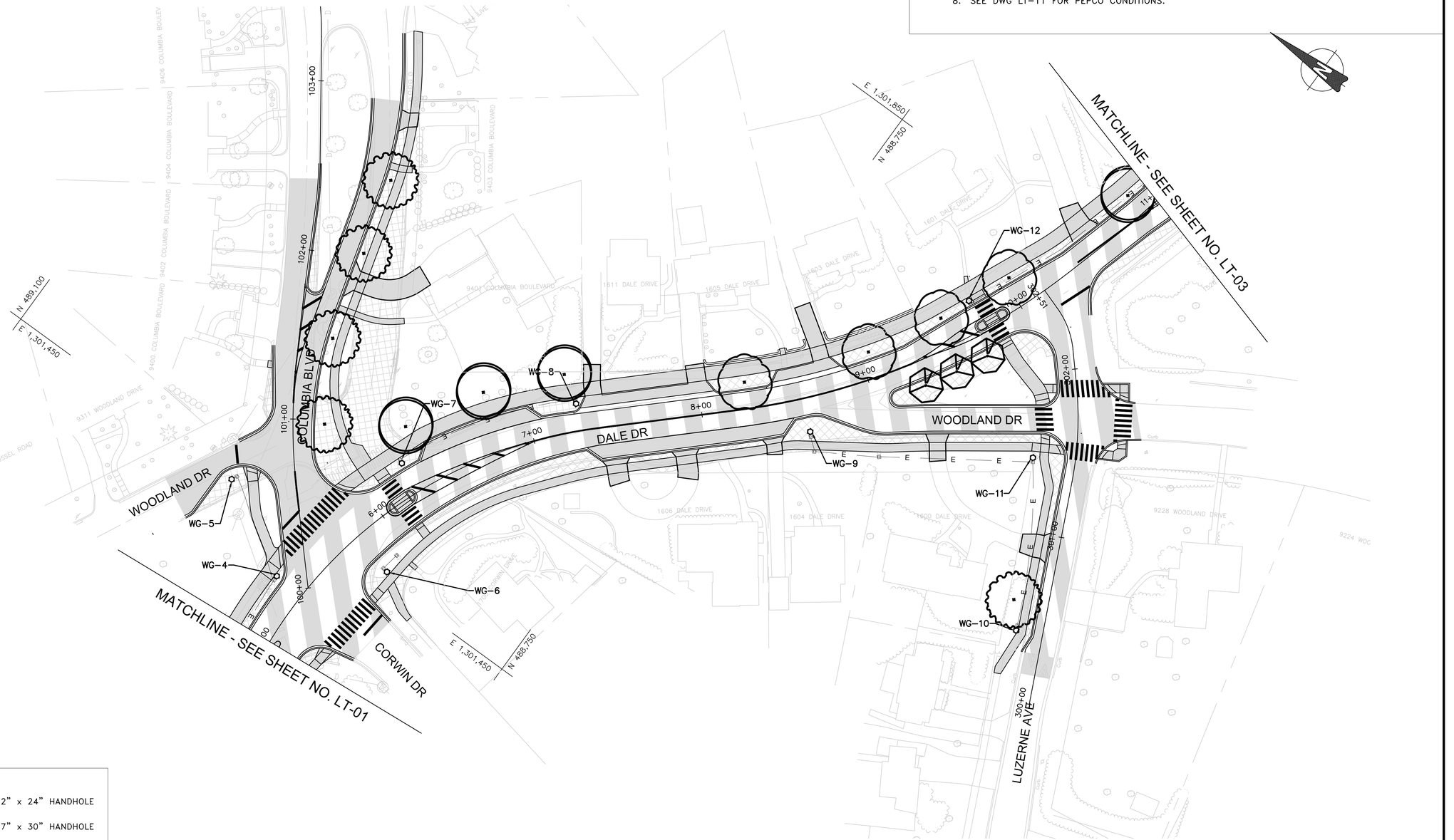
CIP No. : 502109 SHEET 69 of 181

FILE NAME: Q:\2018\1804565_001_Dale_Drive_Pedestria\CADD\pLT_Dale.dwg LAYOUT NAME: LT–01 PLOTTED: Wednesday, November 23, 2022 – 11:58am USER: MStraughan

POLE #	STATION	OFFSET	NORTHING	EASTING	STREET NAME	WATTAGE	LAMP TYPE	LUMINAIRE STYLE	POLE STYLE
WG-4	5+33.00	18.67' LT	488889.29	1301416.29	COLUMBIA BLVD	70	LED	PROPOSED WASHINGTON GLOBE	12" CAST ALUMINUM
WG-5	100+67.77	37.50' LT	488944.2	1301446.75	DALE DRIVE	70	LED	PROPOSED WASHINGTON GLOBE	12" CAST ALUMINUM
WG-6	5+80.00	27.00' RT	4488838.27	1301456.39	DALE DRIVE	70	LED	PROPOSED WASHINGTON GLOBE	12" CAST ALUMINUM
WG-7	6+26.00	19.35' LT	488868.85	1301513.28	DALE DRIVE	70	LED	PROPOSED WASHINGTON GLOBE	12" CAST ALUMINUM
WG-8	7+28.00	16.00' LT	488806.60	1301601.91	DALE DRIVE	70	LED	PROPOSED WASHINGTON GLOBE	12" CAST ALUMINUM
WG-9	8+60.00	20.00' RT	488685.58	1301669.67	DALE DRIVE	70	LED	PROPOSED WASHINGTON GLOBE	12" CAST ALUMINUM
WG-10	300+41.23	15.67' LT	488518.71	1301646.41	LUZERNE AVE	70	LED	PROPOSED WASHINGTON GLOBE	12" CAST ALUMINUM
WG-11	301+44.33	25.00' LT	488570.68	1301734.37	LUZERNE AVE	70	LED	PROPOSED WASHINGTON GLOBE	12" CAST ALUMINUM
WG-12	9+75.00	18.59' LT	488655.37	1301786.86	DALE DRIVE	70	LED	PROPOSED WASHINGTON GLOBE	12" CAST ALUMINUM

LIGHTING NOTES:

1. EXISTING LEASE LIGHTING AND PENDANT POST STREET LIGHT POLES TO REMAIN.
2. PROPOSED LIGHT POLES TO BE CABLED AND POWERED BY PEPCO.
3. ALL PROPOSED LIGHTING SHALL INCORPORATE LED LUMINAIRES.
4. FOUNDATION OF DECORATIVE LAMP POST SHALL BE 4.5' IN HEIGHT AND 2' IN DIAMETER PER SPECIFICATIONS FOR STREETLIGHT HARDWARE.
5. SEE LANDSCAPING PLANS FOR EXISTING TREES TO BE REMOVED.
6. CONTRACTOR TO PROVIDE LIGHT POLES, FOUNDATIONS, FIXTURES, HANDHOLES, AND CONDUIT FOR PEDESTRIAN LIGHTING. PEPCO TO RUN WIRING FROM SOURCE POLES AND SPLICE INTO PROVIDED POLES / LUMINAIRES AT LOCATIONS NOTED ON PLANS.
7. CONDUIT TO BE DIRECT BURIED AND CONCRETE ENCASED WHEN LOCATED BENEATH PAVEMENT.
8. SEE DWG LT-11 FOR PEPCO CONDITIONS.



LIGHTING LEGEND

- PROPOSED LED WASHINGTON GLOBE PEDESTRIAN LIGHT POLE
- EXISTING LIGHT & POLE TO REMAIN
- PROPOSED LED LIGHT ON POWER POLE
- EXISTING LIGHT ON POWER POLE TO REMAIN
- XXX — POLE NUMBER
- E1 — 12" x 24" HANDHOLE
- E2 — 17" x 30" HANDHOLE
- —— E —— — (2) 4" SCHEDULE 40 PVC CONDUIT
- PROPOSED TREE (ULTIMATE CANOPY)
- PROPOSED TREE (ULTIMATE CANOPY)
- EXISTING TREE

DRAFT
NOT FOR CONSTRUCTION

JMT

NO.	REVISION	DATE	BY

MONTGOMERY COUNTY
DEPARTMENT OF TRANSPORTATION
GAITHERSBURG, MARYLAND

RECOMMENDED FOR APPROVAL

Chief, Design Section — Date

APPROVED

Chief, Division of Transportation Engineering — Date

Designed by: MDS Drawn by: MDS Checked by: JMC

LT-02
LIGHTING PLAN
DALE DRIVE SHARED USE PATH

0 30' 60'

SCALE: 1"=30' DATE: NOVEMBER 2022

CIP No. : 502109 SHEET 70 of 181

FILE NAME: Q:\2018\1804565_001_Dale_Drive_Pedestria\CADD\pLT_Dale.dwg LAYOUT NAME: LT-02 PLOTTED: Wednesday, November 23, 2022 - 11:59am USER: MStraughan

POLE #	STATION	OFFSET	NORTHING	EASTING	STREET NAME	WATTAGE	LAMP TYPE	LUMINAIRE STYLE	POLE STYLE
WG-13	11+12.00	27.00' LT	488622.47	1301916.97	DALE DRIVE	70	LED	PROPOSED WASHINGTON GLOBE	12" CAST ALUMINUM
WG-14	12+11.50	25.67' LT	488594.05	1302012.07	DALE DRIVE	70	LED	PROPOSED WASHINGTON GLOBE	12" CAST ALUMINUM
WG-15	13+05.00	26.40' LT	488569.13	1302102.32	DALE DRIVE	70	LED	PROPOSED WASHINGTON GLOBE	12" CAST ALUMINUM
WG-16	14+29.50	25.67' LT	488534.43	1302221.59	DALE DRIVE	70	LED	PROPOSED WASHINGTON GLOBE	12" CAST ALUMINUM
WG-17	15+61.50	25.67' LT	488498.26	1302348.70	DALE DRIVE	70	LED	PROPOSED WASHINGTON GLOBE	12" CAST ALUMINUM
WG-18	16+51.50	25.67' LT	488473.74	1302435.10	DALE DRIVE	70	LED	PROPOSED WASHINGTON GLOBE	12" CAST ALUMINUM

LIGHTING NOTES:

1. EXISTING LEASE LIGHTING AND PENDANT POST STREET LIGHT POLES TO REMAIN.
2. PROPOSED LIGHT POLES TO BE CABLED AND POWERED BY PEPCO.
3. ALL PROPOSED LIGHTING SHALL INCORPORATE LED LUMINAIRES.
4. FOUNDATION OF DECORATIVE LAMP POST SHALL BE 4.5' IN HEIGHT AND 2' IN DIAMETER PER SPECIFICATIONS FOR STREETLIGHT HARDWARE.
5. SEE LANDSCAPING PLANS FOR EXISTING TREES TO BE REMOVED.
6. CONTRACTOR TO PROVIDE LIGHT POLES, FOUNDATIONS, FIXTURES, HANDHOLES, AND CONDUIT FOR PEDESTRIAN LIGHTING. PEPCO TO RUN WIRING FROM SOURCE POLES AND SPLICE INTO PROVIDED POLES / LUMINAIRES AT LOCATIONS NOTED ON PLANS.
7. CONDUIT TO BE DIRECT BURIED AND CONCRETE ENCASED WHEN LOCATED BENEATH PAVEMENT.
8. SEE DWG LT-11 FOR PEPCO CONDITIONS.



LIGHTING LEGEND

- PROPOSED LED WASHINGTON GLOBE PEDESTRIAN LIGHT POLE
- EXISTING LIGHT & POLE TO REMAIN
- PROPOSED LED LIGHT ON POWER POLE
- EXISTING LIGHT ON POWER POLE TO REMAIN
- XXX — POLE NUMBER
- E1 — 12" x 24" HANDHOLE
- E2 — 17" x 30" HANDHOLE
- —— E —— — (2) 4" SCHEDULE 40 PVC CONDUIT
- PROPOSED TREE (ULTIMATE CANOPY)
- PROPOSED TREE (ULTIMATE CANOPY)
- EXISTING TREE

DRAFT
NOT FOR CONSTRUCTION

JMT

NO.	REVISION	DATE	BY

MONTGOMERY COUNTY
DEPARTMENT OF TRANSPORTATION
GAITHERSBURG, MARYLAND

RECOMMENDED FOR APPROVAL

Chief, Design Section — Date

APPROVED

Chief, Division of Transportation Engineering — Date

Designed by: MDS Drawn by: MDS Checked by: JMC

LT-03
LIGHTING PLAN

DALE DRIVE SHARED USE PATH

0 30' 60'

SCALE: 1"=30'

DATE: NOVEMBER 2022

CIP No. : 502109

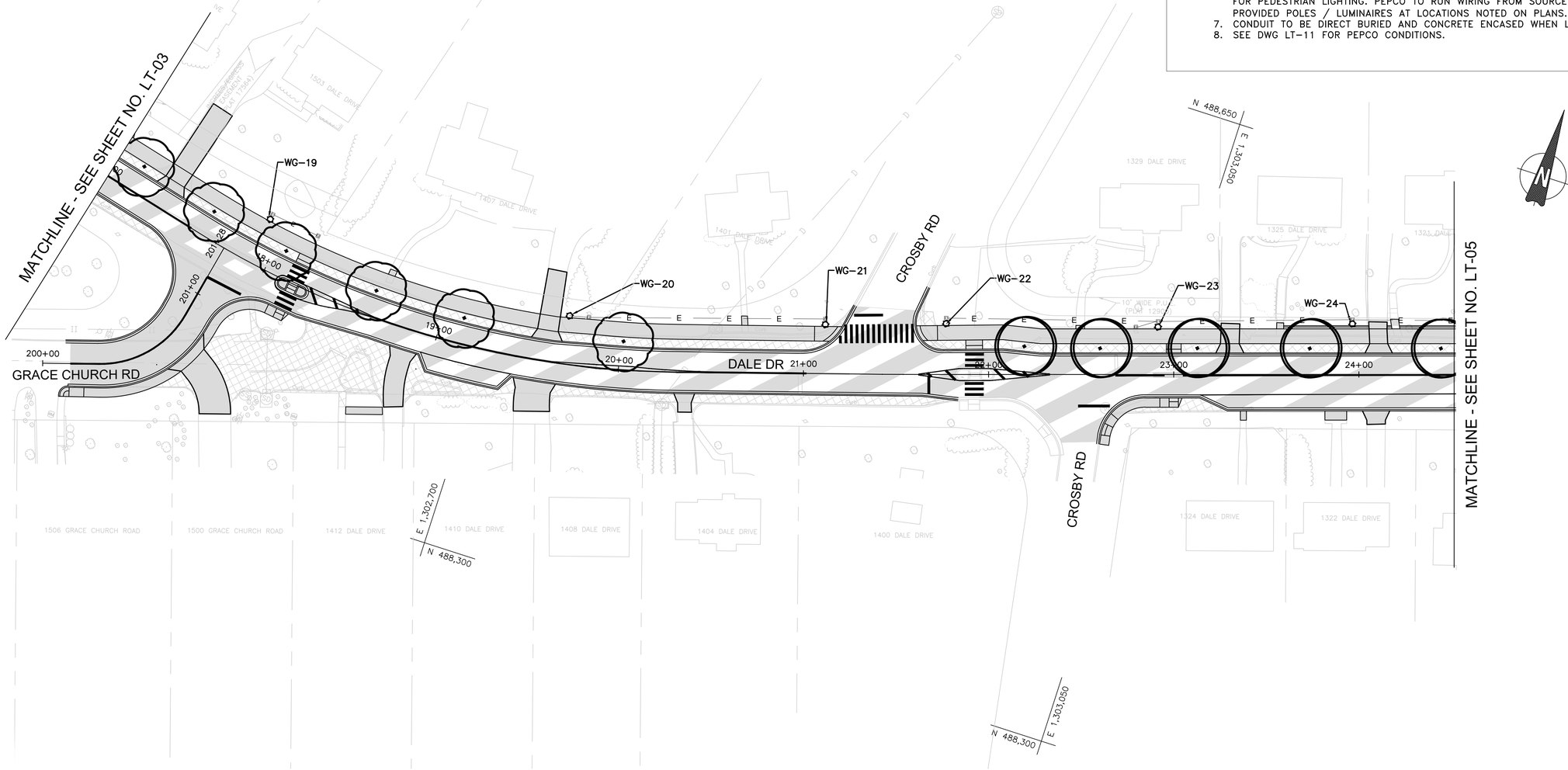
SHEET 71 of 181

FILE NAME: Q:\2018\1804565_001_Dale_Drive_Pedestria\CADD\pLT_Dale.dwg LAYOUT NAME: LT-03 PLOTTED: Wednesday, November 23, 2022 - 11:59am USER: MStraughan

POLE #	STATION	OFFSET	NORTHING	EASTING	STREET NAME	WATTAGE	LAMP TYPE	LUMINAIRE STYLE	POLE STYLE
WG–19	17+90.00	25.67' LT	488440.80	1302567.18	DALE DRIVE	70	LED	PROPOSED WASHINGTON GLOBE	12" CAST ALUMINUM
WG–20	19+70.00	26.00' LT	488440.69	1302737.08	DALE DRIVE	70	LED	PROPOSED WASHINGTON GLOBE	12" CAST ALUMINUM
WG–21	21+11.50	26.50' LT	488478.52	1302870.03	DALE DRIVE	70	LED	PROPOSED WASHINGTON GLOBE	12" CAST ALUMINUM
WG–22	21+77.00	27.50' LT	488498.99	1302931.97	DALE DRIVE	70	LED	PROPOSED WASHINGTON GLOBE	12" CAST ALUMINUM
WG–23	22+91.50	25.67' LT	488532.29	1303041.44	DALE DRIVE	70	LED	PROPOSED WASHINGTON GLOBE	12" CAST ALUMINUM
WG–24	23+96.50	27.33' LT	488566.04	1303140.88	DALE DRIVE	70	LED	PROPOSED WASHINGTON GLOBE	12" CAST ALUMINUM

LIGHTING NOTES:

1. EXISTING LEASE LIGHTING AND PENDANT POST STREET LIGHT POLES TO REMAIN.
2. PROPOSED LIGHT POLES TO BE CABLED AND POWERED BY PEPCO.
3. ALL PROPOSED LIGHTING SHALL INCORPORATE LED LUMINAIRES.
4. FOUNDATION OF DECORATIVE LAMP POST SHALL BE 4.5' IN HEIGHT AND 2' IN DIAMETER PER SPECIFICATIONS FOR STREETLIGHT HARDWARE.
5. SEE LANDSCAPING PLANS FOR EXISTING TREES TO BE REMOVED.
6. CONTRACTOR TO PROVIDE LIGHT POLES, FOUNDATIONS, FIXTURES, HANDHOLES, AND CONDUIT FOR PEDESTRIAN LIGHTING. PEPCO TO RUN WIRING FROM SOURCE POLES AND SPLICE INTO PROVIDED POLES / LUMINAIRES AT LOCATIONS NOTED ON PLANS.
7. CONDUIT TO BE DIRECT BURIED AND CONCRETE ENCASED WHEN LOCATED BENEATH PAVEMENT.
8. SEE DWG LT–11 FOR PEPCO CONDITIONS.



LIGHTING LEGEND

- PROPOSED LED WASHINGTON GLOBE PEDESTRIAN LIGHT POLE
- EXISTING LIGHT & POLE TO REMAIN
- PROPOSED LED LIGHT ON POWER POLE
- EXISTING LIGHT ON POWER POLE TO REMAIN
- XXX POLE NUMBER
- E1 12" x 24" HANDHOLE
- E2 17" x 30" HANDHOLE
- E (2) 4" SCHEDULE 40 PVC CONDUIT
- PROPOSED TREE (ULTIMATE CANOPY)
- PROPOSED TREE (ULTIMATE CANOPY)
- EXISTING TREE

DRAFT
NOT FOR CONSTRUCTION

NO.	REVISION	DATE	BY

MONTGOMERY COUNTY
DEPARTMENT OF TRANSPORTATION
GAITHERSBURG, MARYLAND

RECOMMENDED FOR APPROVAL

Chief, Design Section — Date

APPROVED

Chief, Division of Transportation Engineering — Date

Designed by: MDS Drawn by: MDS Checked by: JMC

LT–04
LIGHTING PLAN
DALE DRIVE
SHARED USE PATH

0 30' 60'
SCALE: 1"=30'
DATE: NOVEMBER 2022

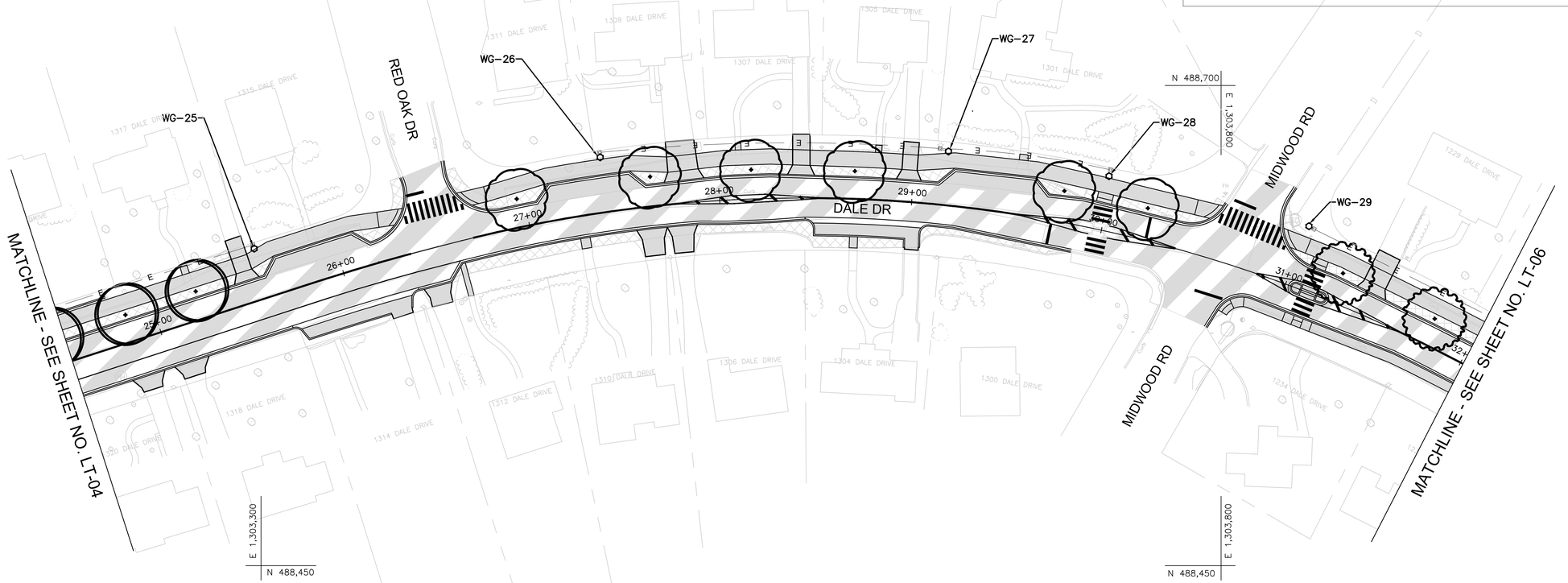
CIP No. : 502109
SHEET 72 of 181

FILE NAME: Q:\2018\1804565_001_Dale_Drive_Pedestria\CADD\pLT_Dale.dwg LAYOUT NAME: LT–04 PLOTTED: Wednesday, November 23, 2022 – 11:59am USER: MStraughan

POLE #	STATION	OFFSET	NORTHING	EASTING	STREET NAME	WATTAGE	LAMP TYPE	LUMINAIRE STYLE	POLE STYLE
WG–25	25+59.56	26.38' LT	488615.08	1303296.41	DALE DRIVE	70	LED	PROPOSED WASHINGTON GLOBE	12" CAST ALUMINUM
WG–26	27+41.50	28.67' LT	488662.62	1303476.64	DALE DRIVE	70	LED	PROPOSED WASHINGTON GLOBE	12" CAST ALUMINUM
WG–27	29+16.50	28.00' LT	488665.66	1303658.03	DALE DRIVE	70	LED	PROPOSED WASHINGTON GLOBE	12" CAST ALUMINUM
WG–28	29+98.00	28.33' LT	488652.80	1303741.66	DALE DRIVE	70	LED	PROPOSED WASHINGTON GLOBE	12" CAST ALUMINUM
WG–29	31+01.00	32.50' LT	488626.78	1303845.79	DALE DRIVE	70	LED	PROPOSED WASHINGTON GLOBE	12" CAST ALUMINUM

LIGHTING NOTES:

1. EXISTING LEASE LIGHTING AND PENDANT POST STREET LIGHT POLES TO REMAIN.
2. PROPOSED LIGHT POLES TO BE CABLED AND POWERED BY PEPCO.
3. ALL PROPOSED LIGHTING SHALL INCORPORATE LED LUMINAIRES.
4. FOUNDATION OF DECORATIVE LAMP POST SHALL BE 4.5' IN HEIGHT AND 2' IN DIAMETER PER SPECIFICATIONS FOR STREETLIGHT HARDWARE.
5. SEE LANDSCAPING PLANS FOR EXISTING TREES TO BE REMOVED.
6. CONTRACTOR TO PROVIDE LIGHT POLES, FOUNDATIONS, FIXTURES, HANDHOLES, AND CONDUIT FOR PEDESTRIAN LIGHTING. PEPCO TO RUN WIRING FROM SOURCE POLES AND SPLICE INTO PROVIDED POLES / LUMINAIRES AT LOCATIONS NOTED ON PLANS.
7. CONDUIT TO BE DIRECT BURIED AND CONCRETE ENCASED WHEN LOCATED BENEATH PAVEMENT.
8. SEE DWG LT–11 FOR PEPCO CONDITIONS.



LIGHTING LEGEND

PROPOSED LED WASHINGTON GLOBE PEDESTRIAN LIGHT POLE	E1 — 12" x 24" HANDHOLE
EXISTING LIGHT & POLE TO REMAIN	E2 — 17" x 30" HANDHOLE
PROPOSED LED LIGHT ON POWER POLE	—— E —— (2) 4" SCHEDULE 40 PVC CONDUIT
EXISTING LIGHT ON POWER POLE TO REMAIN	PROPOSED TREE (ULTIMATE CANOPY)
XXX POLE NUMBER	PROPOSED TREE (ULTIMATE CANOPY)
	EXISTING TREE

DRAFT
NOT FOR CONSTRUCTION

JMT

NO.	REVISION	DATE	BY

MONTGOMERY COUNTY
DEPARTMENT OF TRANSPORTATION
GAITHERSBURG, MARYLAND

RECOMMENDED FOR APPROVAL

Chief, Design Section — Date

APPROVED

Chief, Division of Transportation Engineering — Date

Designed by: MDS Drawn by: MDS Checked by: JMC

LT–05
LIGHTING PLAN
DALE DRIVE SHARED USE PATH

0 30' 60'

SCALE: 1"=30' DATE: NOVEMBER 2022

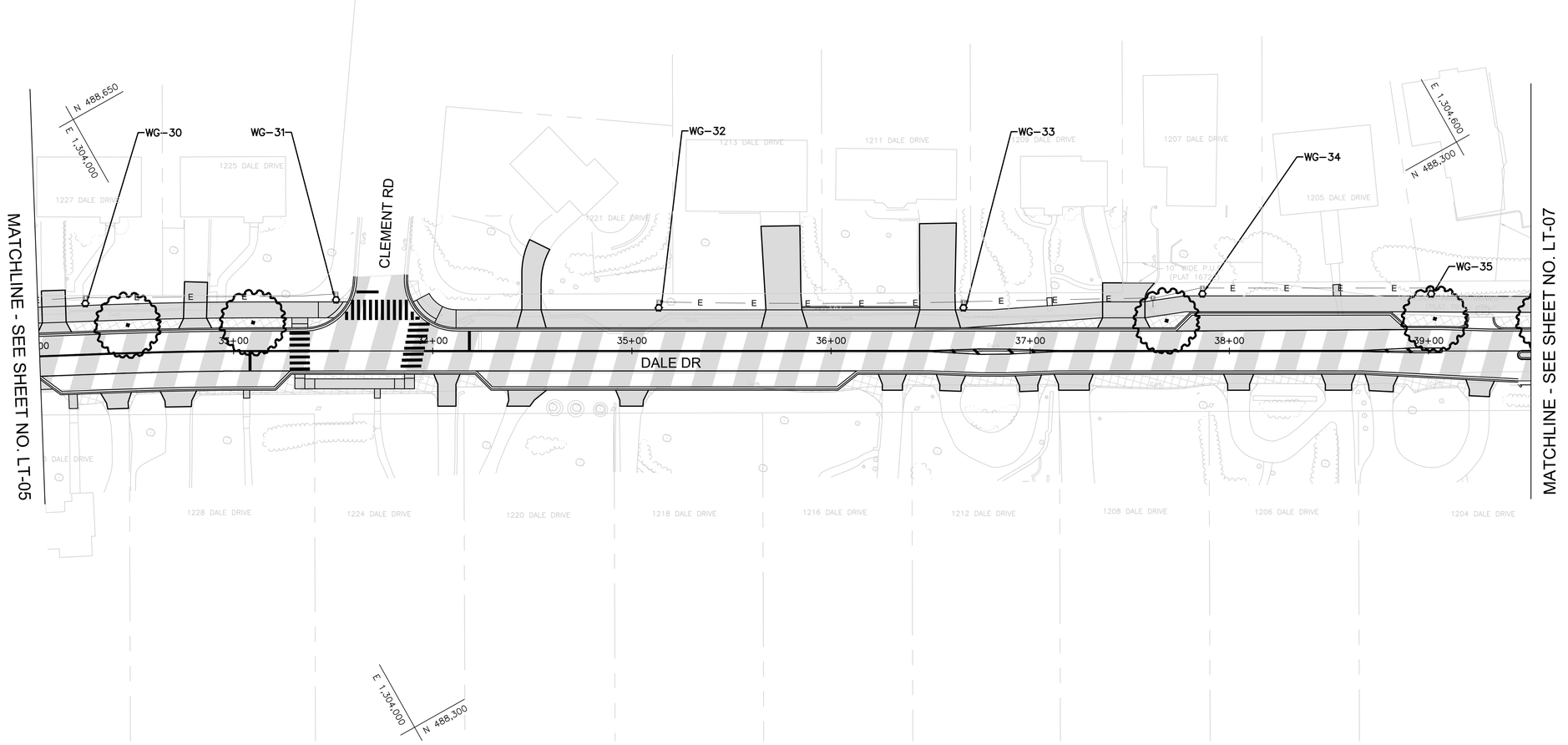
CIP No. : 502109 SHEET 73 of 181

FILE NAME: Q:\2018\1804565_001_Dale_Drive_Pedestria\CADD\pLT_Dale.dwg LAYOUT NAME: LT–05 PLOTTED: Wednesday, November 23, 2022 – 12:00pm USER: MStraughan

POLE #	STATION	OFFSET	NORTHING	EASTING	STREET NAME	WATTAGE	LAMP TYPE	LUMINAIRE STYLE	POLE STYLE
WG-30	32+26.50	25.67' LT	488566.47	1303960.05	DALE DRIVE	70	LED	PROPOSED WASHINGTON GLOBE	12" CAST ALUMINUM
WG-31	33+51.50	25.67' LT	488506.41	1304070.71	DALE DRIVE	70	LED	PROPOSED WASHINGTON GLOBE	12" CAST ALUMINUM
WG-32	35+13.50	21.67' LT	488423.58	1304210.01	DALE DRIVE	70	LED	PROPOSED WASHINGTON GLOBE	12" CAST ALUMINUM
WG-33	36+66.50	21.67' LT	488348.65	1304343.40	DALE DRIVE	70	LED	PROPOSED WASHINGTON GLOBE	12" CAST ALUMINUM
WG-34	37+86.50	28.67' LT	488295.99	1304451.46	DALE DRIVE	70	LED	PROPOSED WASHINGTON GLOBE	12" CAST ALUMINUM
WG-35	39+01.37	28.67' LT	488239.72	1304551.63	DALE DRIVE	70	LED	PROPOSED WASHINGTON GLOBE	12" CAST ALUMINUM

LIGHTING NOTES:

1. EXISTING LEASE LIGHTING AND PENDANT POST STREET LIGHT POLES TO REMAIN.
2. PROPOSED LIGHT POLES TO BE CABLED AND POWERED BY PEPCO.
3. ALL PROPOSED LIGHTING SHALL INCORPORATE LED LUMINAIRES.
4. FOUNDATION OF DECORATIVE LAMP POST SHALL BE 4.5' IN HEIGHT AND 2' IN DIAMETER PER SPECIFICATIONS FOR STREETLIGHT HARDWARE.
5. SEE LANDSCAPING PLANS FOR EXISTING TREES TO BE REMOVED.
6. CONTRACTOR TO PROVIDE LIGHT POLES, FOUNDATIONS, FIXTURES, HANDHOLES, AND CONDUIT FOR PEDESTRIAN LIGHTING. PEPCO TO RUN WIRING FROM SOURCE POLES AND SPLICE INTO PROVIDED POLES / LUMINAIRES AT LOCATIONS NOTED ON PLANS.
7. CONDUIT TO BE DIRECT BURIED AND CONCRETE ENCASED WHEN LOCATED BENEATH PAVEMENT.
8. SEE DWG LT-11 FOR PEPCO CONDITIONS.



LIGHTING LEGEND

- PROPOSED LED WASHINGTON GLOBE PEDESTRIAN LIGHT POLE
- EXISTING LIGHT & POLE TO REMAIN
- PROPOSED LED LIGHT ON POWER POLE
- EXISTING LIGHT ON POWER POLE TO REMAIN
- XXX POLE NUMBER
- E1 12" x 24" HANDHOLE
- E2 17" x 30" HANDHOLE
- E (2) 4" SCHEDULE 40 PVC CONDUIT
- PROPOSED TREE (ULTIMATE CANOPY)
- PROPOSED TREE (ULTIMATE CANOPY)
- EXISTING TREE

DRAFT
NOT FOR CONSTRUCTION

JMT

NO.	REVISION	DATE	BY

MONTGOMERY COUNTY
DEPARTMENT OF TRANSPORTATION
GAITHERSBURG, MARYLAND

RECOMMENDED FOR APPROVAL

Chief, Design Section — Date

APPROVED

Chief, Division of Transportation Engineering — Date

Designed by: MDS Drawn by: MDS Checked by: JMC

LT-06
LIGHTING PLAN
DALE DRIVE SHARED USE PATH

0 30' 60'

SCALE: 1"=30' DATE: NOVEMBER 2022

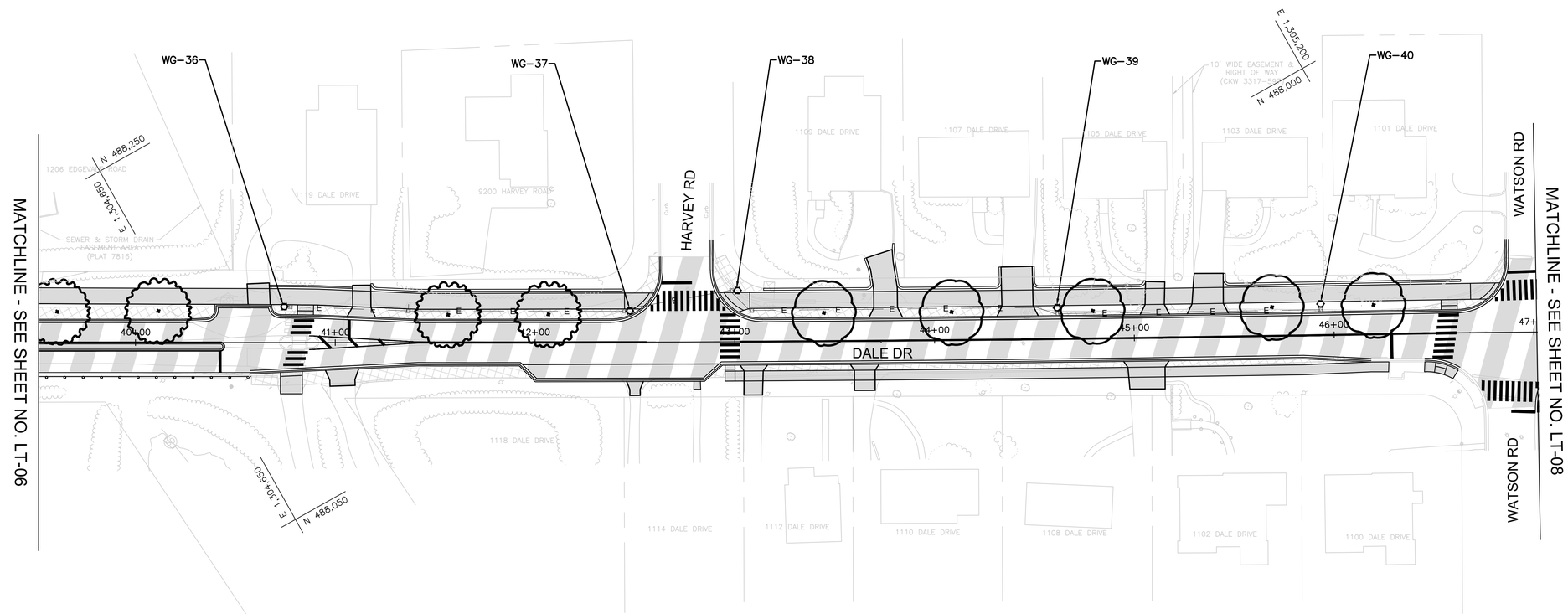
CIP No. : 502109 SHEET 74 of 181

FILE NAME: Q:\2018\1804565_001_Dale_Drive_Pedestria\CADD\pLT_Dale.dwg LAYOUT NAME: LT-06 PLOTTED: Wednesday, November 23, 2022 - 12:00pm USER: MStraughan

POLE #	STATION	OFFSET	NORTHING	EASTING	STREET NAME	WATTAGE	LAMP TYPE	LUMINAIRE STYLE	POLE STYLE
WG-36	40+74.50	18.00' LT	488145.63	1304697.32	DALE DRIVE	70	LED	PROPOSED WASHINGTON GLOBE	12" CAST ALUMINUM
WG-37	42+47.50	15.67' LT	488059.04	1304847.05	DALE DRIVE	70	LED	PROPOSED WASHINGTON GLOBE	12" CAST ALUMINUM
WG-38	43+01.50	25.67' LT	488041.57	1304899.06	DALE DRIVE	70	LED	PROPOSED WASHINGTON GLOBE	12" CAST ALUMINUM
WG-39	44+61.50	15.67' LT	487955.74	1305034.32	DALE DRIVE	70	LED	PROPOSED WASHINGTON GLOBE	12" CAST ALUMINUM
WG-40	45+93.50	15.67' LT	487892.83	1305150.26	DALE DRIVE	70	LED	PROPOSED WASHINGTON GLOBE	12" CAST ALUMINUM

LIGHTING NOTES:

1. EXISTING LEASE LIGHTING AND PENDANT POST STREET LIGHT POLES TO REMAIN.
2. PROPOSED LIGHT POLES TO BE CABLED AND POWERED BY PEPCO.
3. ALL PROPOSED LIGHTING SHALL INCORPORATE LED LUMINAIRES.
4. FOUNDATION OF DECORATIVE LAMP POST SHALL BE 4.5' IN HEIGHT AND 2' IN DIAMETER PER SPECIFICATIONS FOR STREETLIGHT HARDWARE.
5. SEE LANDSCAPING PLANS FOR EXISTING TREES TO BE REMOVED.
6. CONTRACTOR TO PROVIDE LIGHT POLES, FOUNDATIONS, FIXTURES, HANDHOLES, AND CONDUIT FOR PEDESTRIAN LIGHTING. PEPCO TO RUN WIRING FROM SOURCE POLES AND SPLICE INTO PROVIDED POLES / LUMINAIRES AT LOCATIONS NOTED ON PLANS.
7. CONDUIT TO BE DIRECT BURIED AND CONCRETE ENCASED WHEN LOCATED BENEATH PAVEMENT.
8. SEE DWG LT-11 FOR PEPCO CONDITIONS.



LIGHTING LEGEND

- PROPOSED LED WASHINGTON GLOBE PEDESTRIAN LIGHT POLE
- EXISTING LIGHT & POLE TO REMAIN
- PROPOSED LED LIGHT ON POWER POLE
- EXISTING LIGHT ON POWER POLE TO REMAIN
- XXX POLE NUMBER
- E1 12" x 24" HANDHOLE
- E2 17" x 30" HANDHOLE
- E (2) 4" SCHEDULE 40 PVC CONDUIT
- PROPOSED TREE (ULTIMATE CANOPY)
- PROPOSED TREE (ULTIMATE CANOPY)
- EXISTING TREE

DRAFT
NOT FOR CONSTRUCTION

NO.	REVISION	DATE	BY

MONTGOMERY COUNTY
DEPARTMENT OF TRANSPORTATION
GAITHERSBURG, MARYLAND

RECOMMENDED FOR APPROVAL

Chief, Design Section — Date

APPROVED

Chief, Division of Transportation Engineering — Date

Designed by: MDS Drawn by: MDS Checked by: JMC

LT-07
LIGHTING PLAN
DALE DRIVE
SHARED USE PATH

0 30' 60'

SCALE: 1"=30' DATE: NOVEMBER 2022

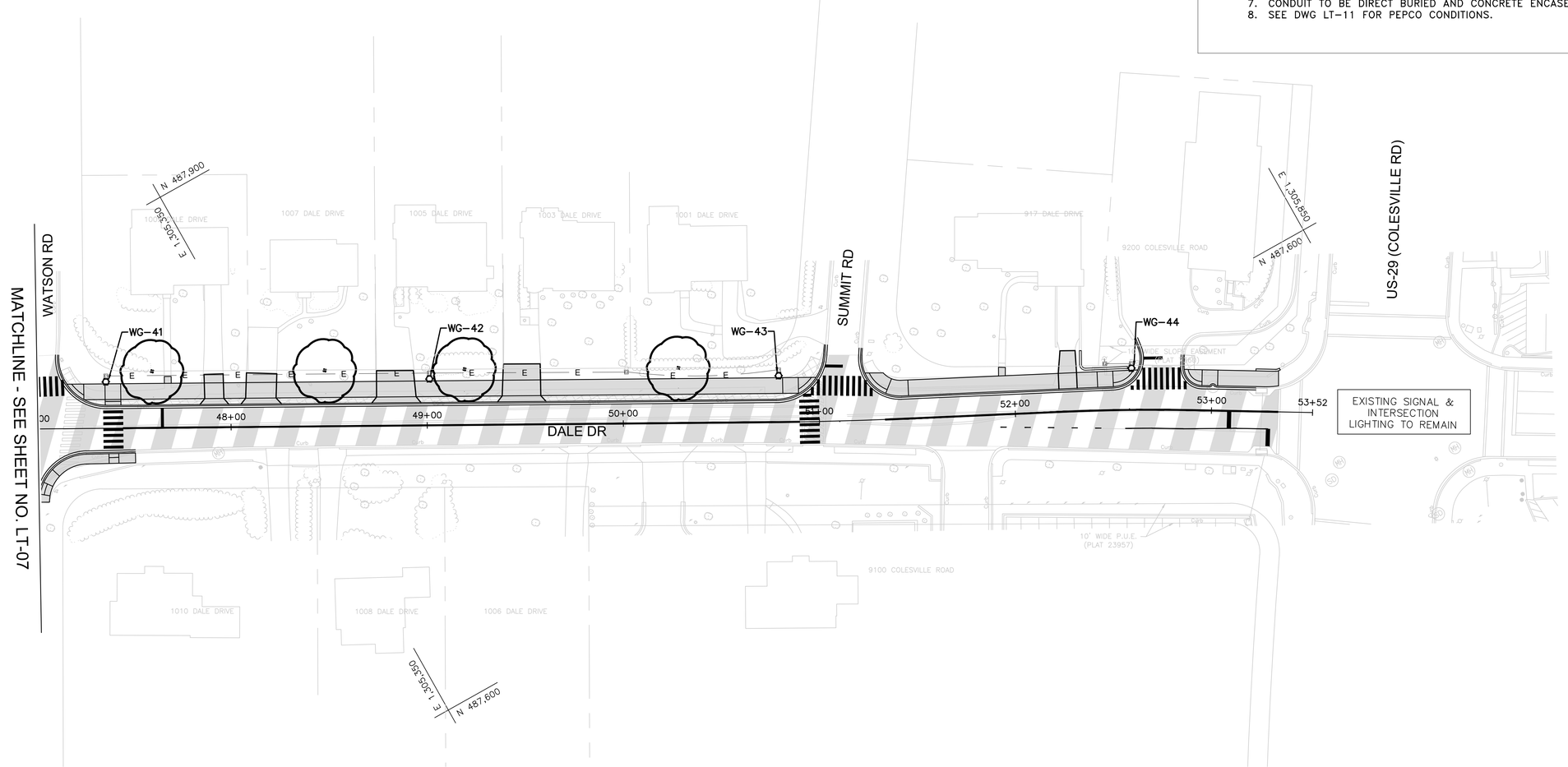
CIP No. : 502109 SHEET 75 of 181

FILE NAME: Q:\2018\1804565_001_Dale_Drive_Pedestria\CADD\pLT_Dale.dwg LAYOUT NAME: LT-07 PLOTTED: Wednesday, November 23, 2022 - 12:00pm USER: MStraughan

POLE #	STATION	OFFSET	NORTHING	EASTING	STREET NAME	WATTAGE	LAMP TYPE	LUMINAIRE STYLE	POLE STYLE
WG-41	47+36.50	23.67' LT	487831.46	1305279.70	DALE DRIVE	70	LED	PROPOSED WASHINGTON GLOBE	12" CAST ALUMINUM
WG-42	49+01.50	23.67' LT	487751.97	1305424.28	DALE DRIVE	70	LED	PROPOSED WASHINGTON GLOBE	12" CAST ALUMINUM
WG-43	50+79.50	23.67' LT	487666.19	1305580.43	DALE DRIVE	70	LED	PROPOSED WASHINGTON GLOBE	12" CAST ALUMINUM
WG-44	52+59.50	21.25' LT	487581.42	1305739.05	DALE DRIVE	70	LED	PROPOSED WASHINGTON GLOBE	12" CAST ALUMINUM

LIGHTING NOTES:

1. EXISTING LEASE LIGHTING AND PENDANT POST STREET LIGHT POLES TO REMAIN.
2. PROPOSED LIGHT POLES TO BE CABLED AND POWERED BY PEPCO.
3. ALL PROPOSED LIGHTING SHALL INCORPORATE LED LUMINAIRES.
4. FOUNDATION OF DECORATIVE LAMP POST SHALL BE 4.5' IN HEIGHT AND 2' IN DIAMETER PER SPECIFICATIONS FOR STREETLIGHT HARDWARE.
5. SEE LANDSCAPING PLANS FOR EXISTING TREES TO BE REMOVED.
6. CONTRACTOR TO PROVIDE LIGHT POLES, FOUNDATIONS, FIXTURES, HANDHOLES, AND CONDUIT FOR PEDESTRIAN LIGHTING. PEPCO TO RUN WIRING FROM SOURCE POLES AND SPLICE INTO PROVIDED POLES / LUMINAIRES AT LOCATIONS NOTED ON PLANS.
7. CONDUIT TO BE DIRECT BURIED AND CONCRETE ENCASED WHEN LOCATED BENEATH PAVEMENT.
8. SEE DWG LT-11 FOR PEPCO CONDITIONS.



LIGHTING LEGEND

- PROPOSED LED WASHINGTON GLOBE PEDESTRIAN LIGHT POLE
- EXISTING LIGHT & POLE TO REMAIN
- PROPOSED LED LIGHT ON POWER POLE
- EXISTING LIGHT ON POWER POLE TO REMAIN
- XXX — POLE NUMBER
- E1 — 12" x 24" HANDHOLE
- E2 — 17" x 30" HANDHOLE
- E — (2) 4" SCHEDULE 40 PVC CONDUIT
- PROPOSED TREE (ULTIMATE CANOPY)
- PROPOSED TREE (ULTIMATE CANOPY)
- EXISTING TREE

DRAFT
NOT FOR CONSTRUCTION

JMT

NO.	REVISION	DATE	BY

MONTGOMERY COUNTY
DEPARTMENT OF TRANSPORTATION
GAITHERSBURG, MARYLAND

RECOMMENDED FOR APPROVAL

Chief, Design Section — Date

APPROVED

Chief, Division of Transportation Engineering — Date

Designed by: MDS Drawn by: MDS Checked by: JMC

LT-08
LIGHTING PLAN

DALE DRIVE SHARED USE PATH

0 30' 60'

SCALE: 1"=30' DATE: NOVEMBER 2022

CIP No. : 502109 SHEET 76 of 181

FILE NAME: Q:\2018\1804565_001_Dale_Drive_Pedestria\CADD\pLT_Dale.dwg LAYOUT NAME: LT-08 PLOTTED: Wednesday, November 23, 2022 - 12:01pm USER: MStraughan

MONTGOMERY COUNTY, MARYLAND
DEPARTMENT OF TRANSPORTATION
DIVISION OF TRAFFIC AND PARKING SERVICES

JUNE 2016

WASHINGTON GLOBE DECORATIVE LED STYLE LUMINAIRE
SEMI CUT-OFF HARD TOP

1) PURPOSE
The purpose of these specifications is to provide minimum requirements for the design, manufacture, finishing and delivery of the Washington Globe (hard top) LED luminaire. The Washington Globe is intended to be mounted on decorative pole as specified, along roadways throughout Montgomery County. Any manufacturer, distributor or vendor who submits bid shall agree with these specifications

2) DESCRIPTION
The luminaire shall be an outdoor decorative post top fixture, cylindrical in shape with an overall height between 42.5 +/- 2.0 inches and a overall width between 16.5 +/- 0.5 inches for the globe (see attached drawing). All exterior and structural parts shall consist of aluminum alloy or cast iron. Exterior castings shall be cast in one piece having a smooth surface finish and free of mold lines. A separate cover for a ballast drawer/tray is permitted if the ballast drawer cover is secured to the luminaire body with captive fasteners. All components shall fit together snugly and shall be fitted with continuous neoprene gaskets so as to weather proof joints between metal interfaces. Visible metal surfaces shall have raised decorations integrally molded in the base piece. All metal parts shall be corrosion resistant. The luminaire shall come ready for quick an easy field assembly or fully assembled:

Each luminaire shall include the following components:
1) LED Optical Assembly (Type III distribution)
2) 120 volt LED Driver
3) Button type photocell installed on the metal body of the luminaire or ballast tray cover;
4) All necessary hardware and fasteners to assemble and secure on post tenon.

3) DESIGN CRITERIA
3.1) AASHTO Standards
The luminaire shall meet the requirements of the American Association of State Highway and Transportation Officials (AASHTO), Standard Specifications for Structural Supports for Highway Signs, Luminaires, and Traffic Signals" latest edition.

3.2) Wind Load
All components of the luminaire shall be designed to resist (at yield strength of the materials without permanent deflection or destruction), test loads equivalent to the calculated loads developed by the velocity pressure of at least an 80 MPH wind. A minimum safety factor of 1.82 on the yield strength shall be maintained.

4) GLOBE
The globe should be supplied as two pieces, chemically matching material as a unit and permanently sealed together with a chemical bonding process. The globe bottom shall be alabaster rippled and made of UV stabilized acrylic. The globe roof shall be of a spun aluminum design. The roof and bottom globe sections are secured in a slip-fit, 1/2" overlap design and providing a mechanical lock and enabling easy future replacement of either the roof or bottom globe section if required. The roof finish shall be polyester thermoset powdercoat. The globe shall be of a traditional "Washington Globe" (acorn) shape designed to achieve the photometric performance specified by Illumination Engineering Society (IES). The bottom surface of the globe shall interface closely with the metal body of the fixture so as to provide a weather, dust, and insect proof interface. The globe or its mounting ring shall be fastened with three or more recessed set screws to the body of the fixture.

5) DRIVER and SURGE PROTECTOR
The driver shall be mounted to facilitate easy removal for maintenance operations. The driver shall be equipped with a 10KV Surge Protection and suppression system. All electrical connections shall be polarized and of plug-in design. The driver shall be wired to receive 120 volt AC current. The driver shall reliably start and operate the lamp in ambient temperatures down to minus 30 degrees. The terminal block shall be capable of accepting up to a #6 AWG wire.

6) LED Color Temperature (CCT) and Rendering Index (CRI)
The Correlated Color Temperature (CCT) shall be a nominal Kelvin Temperature of 3500K ±200K with a minimum Color Rendering Index (CRI) of 70.

7) PHOTOCELL
The photocell shall be a twist-lock type or equal, mounted on the metal body of the luminaire or the cover of the ballast tray drawer.

8) METAL BODY
The body shall be cast in one piece and shall have raised surface decorations. The body shall taper smoothly between the slip fitter to the base of the globe. The body shall be constructed with weep holes or channels to prevent rainwater from collecting at the top of the body.

9) SLIP FITTER
The slip fitter shall have a nominal inside diameter of 3.375 inches +/- 0.25 and shall be secured to the lamp post tenon with three of four evenly spaced set screws. The slip fitter shall accommodate a tenon 3.0 inches long.

10) FINIAL
The finial shall be made of cast aluminum, and securely fastened to the top of the globe.

11) FINISH
The exterior surface of the finial and luminaire body shall be factory finished with a dark green electrostatically applied polyester powder coat. The color shall be "Federal Green", federal color 595a, #14036.

SPECIFICATIONS FOR STREETLIGHT HARDWARE



MONTGOMERY COUNTY, MARYLAND
DEPARTMENT OF TRANSPORTATION
TRAFFIC ENGINEERING AND OPERATIONS SECTION

JUNE 2016

STREETLIGHT POST NUMBERING TAGS

1) PURPOSE

The purpose of these specifications is to prescribe the minimum requirements for the design, manufacture, fabrication, finishing and delivery of streetlight post numbering tags. Any manufacturer, distributor or vendor who submits a bid shall agree to comply with these specifications and attached drawings.

2) DESIGN CRITERIA

The streetlight post numbering tags are to be made of aluminum and finished with a similar color coating as that of the streetlight pole it is to be rigidly attached to. This streetlight post numbering tag is intended for use on all streetlight post maintained by Montgomery County.

Each pole numbering tag shall comply to the following:
a) Be 2" wide and 12" long
b) Be a color similar to the streetlight pole
c) Have 5 numbers of an opposite color placed vertically
d) All White/Silver surfaces shall be made of retroreflective sheeting
e) All colored surfaces shall be nonreflective

3) MATERIALS

a) TAG

The streetlight post numbering tags shall be 12 inches X 2 inches, fabricated from clear anodized 1/16 inch thick aluminum. The edges shall be smooth and corners rounded and the tag shall fit the streetlight pole shaft.

b) REFLECTIVE AREAS

The streetlight post numbering tag reflective area shall conform to D4956, Type III retroreflective sheeting.

c) NONRELECTIVE AREAS The streetlight post numbering tags nonrelective areas shall be as follows:

a. Numbers on white/silver reflective post tag

b. Backing on all other streetlight post tags

4) MOUNTING HEIGHT

The streetlight post numbering tag should be mounted at a height approximately 10 foot from the surrounding elevation of the ground, unless otherwise approved and directed by the Engineer.

5) MOUNTING ORIENTATION

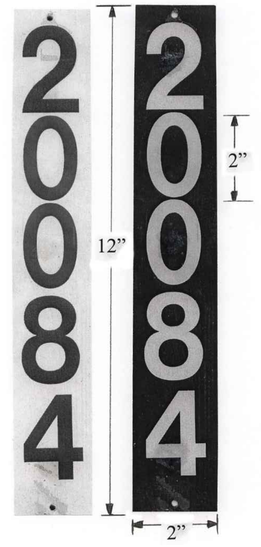
The streetlight post numbering tag shall be oriented and rigidly mounted at a 30 to 45 degree angle, so that approaching traffic can readily observe the tags numbers.

6) MOUNTING HARDHARE

The streetlight post numbering tag shall be secured to the shaft of the streetlight by a means of two (2) 1/8 inch diameter,18-8 stainless steel tamper-proof screw.

7) NUMBERS

The streetlight post numbering tag numbers shall be a minimum of 2 inch high with a minimum of a ¼ inch stroke width.



DRAFT
NOT FOR CONSTRUCTION

JMT

NO.	REVISION	DATE	BY

MONTGOMERY COUNTY
DEPARTMENT OF TRANSPORTATION
GAITHERSBURG, MARYLAND

RECOMMENDED FOR APPROVAL

Chief, Design Section — Date

APPROVED

Chief, Division of Transportation Engineering — Date

Designed by: MDS Drawn by: MDS Checked by: JMC

LT-09
LIGHTING DETAILS

DALE DRIVE
SHARED USE PATH

DATE: NOVEMBER 2022

CIP No. : 502109 SHEET 77 of 181

FILE NAME: Q:\2018\1804565_001_Dale_Drive_Pedestria\CADD\pLT-Details_Dale.dwg LAYOUT NAME: LT-09 PLOTTED: Wednesday, November 23, 2022 - 12:04pm USER: MStraughan

MONTGOMERY COUNTY, MARYLAND
DEPARTMENT OF TRANSPORTATION
TRAFFIC ENGINEERING AND OPERATIONS

JUNE 2016

DECORATIVE (RESIDENTIAL) LAMP POST
FOR USE ON STREETS CLASSIFIED PRIMARY OR LOWER

1) PURPOSE

The purpose of these specifications is to prescribe the minimum requirements for the design, manufacture, fabrication, finishing and delivery of residential, decorative, cast, streetlight poles. These decorative streetlight poles are intended for use along roadways in Montgomery County. Any manufacturer, distributor or vendor who submits a bid shall agree to comply with these specifications and the attached drawings.

Each pole shall include the following:

a) Access plate with attachment hardware;
b) Anchor Bolts, nuts, and washers (as specified);
c) Typical footer design specifications including but not limited to, base template, anchor dimensions, reinforcement and footer details;
d) One (1) pint of touch-up paint, Federal Green, federal color # 595B, # 14036.

2) DESIGN CRITERIA

2.1 AASHTO Standards

The residential, decorative, cast, streetlight post shall meet the requirements of the American Association of State Highway and Transportation Officials (AASHTO) Standard, "Specification for Structural supports for Highway Signs, Luminaires and Traffic Signals," latest edition.

2.2 Wind Load

The residential, decorative, cast, streetlight post shall be deigned to resist (at yield strength of the material without permanent deflection or destruction), test loads equivalent to the calculated wind loads developed by the velocity pressures of a 80 MPH wind with a 30% gust factor. A minimum safety factor of 1.82 on the yield strength shall be maintained.

2.3 Effective Projected Area (EPA)

The residential, decorative, cast, streetlight post shall have a EPA allowable for the following assumptions:

a) Streetlight luminaire shall be assumed to be rectangular in shape with triangular shapes at the top and bottom, minimum length plus width of sixty-five (65) inches, when viewed from the side.

b) The streetlight luminaire shall have a nominal mounting height of 12 feet above the base.

c) One or two (24" x 36") maximum traffic signs may be mounted with the sign's bottom edge 7 feet above the base.

3) MATERIALS

3.1 Iron Casting

The lamp post shall be integrally cast as one piece and shall be cast iron per ASTM A-48--72, Class 30. The sections are to be indicated below. The castings are to be true to pattern, with 16 flutes separated by 16 flat facets. There shall be no visible signs of separation between the cope and drag sections of the mold. All ornamental components shall be cast iron.

3.2 Aluminum Casting

The lamp post may be cast in one piece, as described above, of aluminum alloy of the same details as described above and minimum wall thickness as described below. The alloy used in the casting shall have a minimum yield strength of 30,000 PSI and shall be heat treated as required to provide that yield strength.

3.3 Split Casting

The lamp post may be a multiple piece castings that are factory-assembled into one piece may be considered, provided that there are no gaps between any pieces of the assembly that would allow water seepage or rust. Prior written approval required for the method.

4) PEDESTAL

The pedestal shall be 17 inches +/- 0.25 inch in diameter with a height of 17 1/4 inches +/- 1.0 inch.

5) BOLT CIRCLE

The nominal bolt circle of the lamp post shall be 12.5 inch in diameter and consist of four (4) equally spaced slots to accommodate 5/8 inch diameter anchor bolts

6) SHAFT

The shaft shall taper uniformly from six (6) inches outside diameter at the bottom to a minimum of four (4) inches outside diameter at the top. The shaft section shall consist of sixteen (16) equally spaced flutes. The outer portion of each flute shall have a flat face, 3/8 +/- 1/16 inches in width. The flutes shall remain constant from the top to the bottom of the tapered shaft

7) HEIGHT

The height of the post, less tenon, shall be 12 feet 0 inches. The weight of the cast iron post with complete door assembly, shall be 460 lbs. +/- 5%. All castings shall be painted with a shop coat of iron oxide primer.

8) TENON

The top of the post shall be equipped with a luminaire mounting tenon integrally cast as a part of the post casting. The tenon shall measure 3.25 +/- 0.25 inches outside diameter and be 2.5 inches long.

9) GROUNDING LUG

The post shall be drilled and tapped for a 1/4 inch - # 20 grounding screw, inside the lamp post and opposite the access door,

10) HANDHOLE

The post shall have an handhole/access door with minimum opening 6 +/- 0.5 inches high and shall be a minimum of 3 ½ +/- 1.0 inch wide at the top and 7.5 inches +/- 1.0 inches wide at the bottom secured with stainless steel machine screw shall be provided in the base of the lamp post. The handhole is at 90 degrees clockwise with respect to the luminaire arm when viewed from above the pole.

11) BOTTOM ACCESS HOLE

The pedestal shall have a clear opening at grade a minimum of nine (9) inches in diameter. The base of the lamp post shall have an inside diameter sufficient to accommodate two four inch diameter schedule 40 PVC conduits at the bottom of the post, side by side, for streetlight wiring in accordance with utility company requirements.

12) TOLERANCES

Dimensions may be subject to a tolerance of plus or minus 10%, provided that the appearance and proportions are reasonably identical to the post shown on the attached drawing, in the sole judgement of the County. The 10% tolerance shall not apply to the height of the post nor to the diameter of the tenon, for which no tolerance will be allowed other than normal manufacturing tolerances.

13) ANCHOR BOLTS

Each post shall be furnished with four (4) anchor bolts, each 5/8 inches diameter x 24 inch long, plus a 3" "L" at the bottom. Each bolt shall be supplied with one (1) nut and one (1) washer. Bolts, nuts, and washers shall be fully hot dipped galvanized in accordance with ASTM A153.

14) FINISH

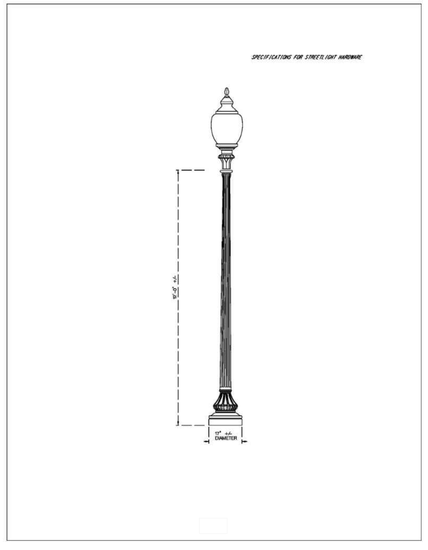
15.1 Cast Aluminum

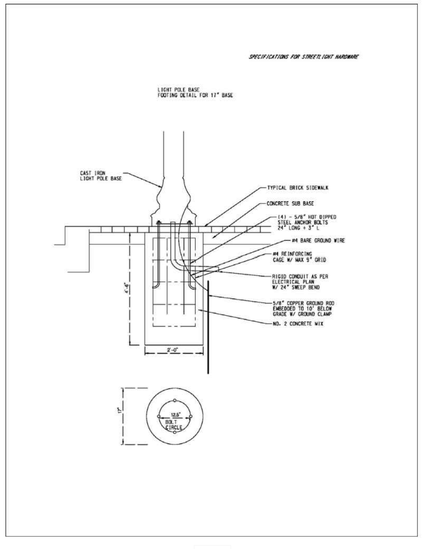
The cast aluminum poles, access doors, and hardware shall be finished with a dark green electrostatically-applied thermoset polyester powder coat, color "Federal Green" or approved equal, as per the attached finish specification "ICS-2". One pint can of Federal Green touch-up enamel or approved equal, shall be supplied.

15.2 Cast Iron

The cast iron poles and all components shall be supplied with one coat of oil-based red lead primer paint. Two (2) coats of enamel "Federal Green", federal color 595B, # 14036 shall be applied to each pole in the field.

16) POLE INFORMATION
The lamp post shall be either the Antique Capitol Series, C12/17-CI/PP, the Washington #12 Standard modified to 12 foot 0 inches in height, less tenon, or approved equal.





DRAFT
NOT FOR CONSTRUCTION

NO.	REVISION	DATE	BY

MONTGOMERY COUNTY
DEPARTMENT OF TRANSPORTATION
GAITHERSBURG, MARYLAND

RECOMMENDED FOR APPROVAL

Chief, Design Section — Date

APPROVED

Chief, Division of Transportation Engineering — Date

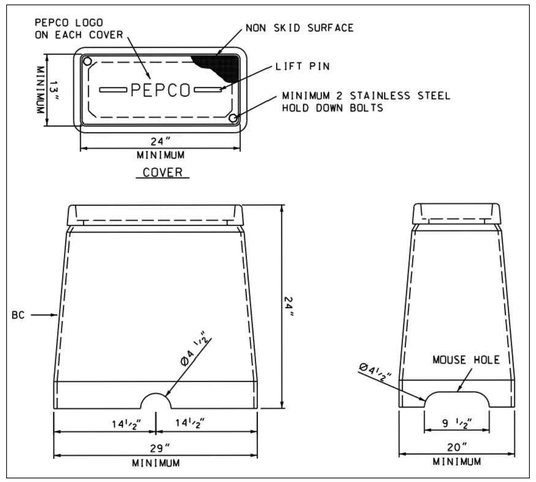
Designed by: MDS Drawn by: MDS Checked by: JMC

LT-10
LIGHTING DETAILS
DALE DRIVE
SHARED USE PATH

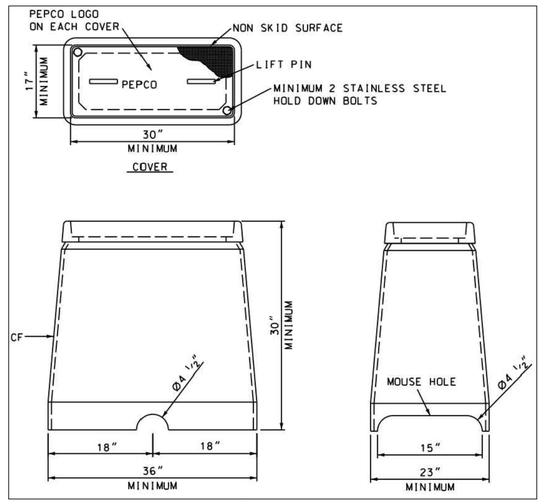
DATE: NOVEMBER 2022

CIP No. : 502109 SHEET 78 of 181

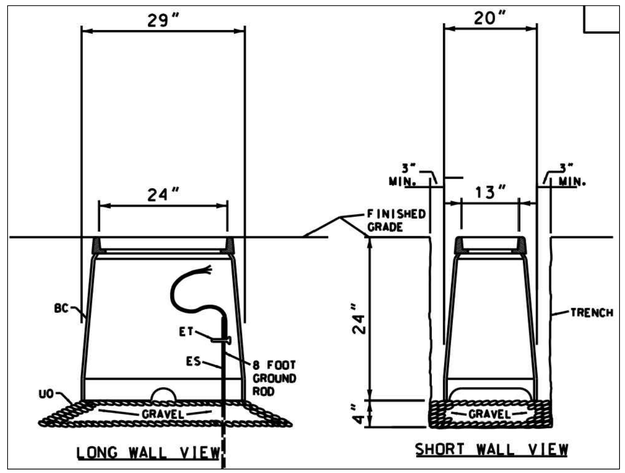
FILE NAME: Q:\2018\1804565_001_Dale_Drive_Pedestria\CADD\pLT-Details_Dale.dwg LAYOUT NAME: LT-10 PLOTTED: Wednesday, November 23, 2022 - 12:04pm USER: MStraughan



HANDHOLE DETAIL – 12" X 24" PEPCO SPLICE BOX



HANDHOLE DETAIL – 17" X 30" PEPCO SOURCE POLE BOX



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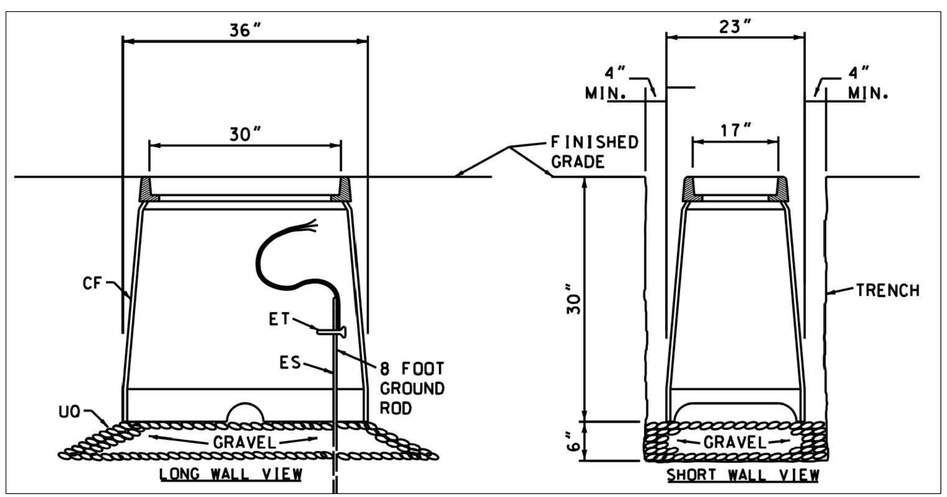


HANDHOLE DETAIL – 17" X 30" PEPCO SOURCE POLE BOX

PEPCO CONDITIONS:

1. CUSTOMER TO OBTAIN ALL PERMITS / PERMISSION REQUIRED BY OTHERS ON PRIVATE PROPERTY.
2. ALL MATERIALS USED ARE TO CONFORM TO PEPCO SPECIFICATIONS. ALL WORK MUST BE DONE IN ACCORDANCE WITH PEPCO'S STANDARDS AND SPECIFICATIONS.
3. WORK TO BE DONE IN A MANNER ACCEPTABLE TO PEPCO AND INSPECTED BY PEPCO'S CONDUIT DEPARTMENT BEFORE ENCASEMENT OR BACKFILLING. E-MAIL CONDUIT INSPECTOR JAMES BROWN, (JBROWN@PEPCO.COM), TWO (2) WEEKS IN ADVANCE TO ARRANGE PRE-CONSTRUCTION MEETING AND SCHEDULE INSPECTION. (CUSTOMER MUST FIRST SUBMIT A DRAWING OF THE FACILITIES TO BE BUILT FOR PEPCO AND APPROVED BY PEPCO).
4. TRANFORMER PAD (INCLUDING GROUNDING) IS TO BE BUILT IN ACCORDANCE WITH PEPCO SPECIFICATION DRAWINGS C.D.007.01, 2-2-0983_2.4, 2.2.0983_4.4, C.D.006.01, C.D.006.02 AND BUILT ON LEVEL GROUND. TEN FEET (10') OF CLEAR SPACE MUST BE PROVIDED IN FRONT OF THE PAD AND THREE FEET (3') ON SIDES AND BACK. PAD MUST BE ACCESSIBLE FROM A ROAD, DRIVE, OR PARKING LOT.
5. CONDUIT TO BE BUILT IN ACCORDANCE WITH PEPCO SPECIFICATION DRAWINGS NO. 6-1-480 AND C.D.001.01.
6. SWEEPBENDS MUST HAVE A RADIUS OF NO LESS THAN 36'.
7. NYLON PULL LINES TO BE INSTALLED IN EACH DUCT FOR FUTURE CABLE INSTALLATION.
8. MANHOLES TO BE CONSTRUCTED WITH 3000 PSI CONCRETE.
9. NO MORE THAN 180° OF BENDS OF DUCT LINE.
10. CONDUIT TO HAVE THREE FEET (3') OF COVER (TOP OF DUCT TO FINISHED GRADE).
11. CONDUIT TO BE ENCASED IN 2000 PSI CONCRETE WITH PEA GRAVEL. NO METALLIC MATERIALS (REBARS, HOLD DOWN WIRES, ETC.) SHALL BE PERMITTED IN SPACES BETWEEN EACH DUCT.
12. CUSTOMER TO ROD ALL CONDUITS, CLEAR ANY OBSTRUCTIONS, AND PROVIDE NYLON PULL LINES PRIOR TO THE INSTALLATION OF PEPCO CABLES.
13. CUSTOMER TO COORDINATE EXACT DEPTH AND LOCATION OF ALL STUB OUTS WITH PEPCO CONSTRUCTION
14. TRANSFORMERS TO BE LOCATED TWENTY (20) FEET FROM COMBUSTIBLE WALLS. SEE PEPCO SPECIFICATION DRAWINGS C.D.006.01, C.D.006.02.
15. ALL ON SITE STRUCTURAL FACILITIES INCLUDING CONDUIT, SPLICE BOXES, TRANSFORMER PADS, ETC. PROVIDED, INSTALLED, AND MAINTAINED BY THE CUSTOMER.
16. TRANSFORMER GROUND GRID TO BE #2 STRANDED, SOFT DRAWN COPPER TINNED (60 FEET), AND 2 FT OF 4/0 STRANDED, SOFT DRAWN COPPER TINNED. PADS TO BE GROUNDED IN CONFORMANCE WITH PEPCO SPECIFICATION DRAWING NUMBER 2.2.0983_4.4 DATED 05/05/09.
17. FOR LOCATIONS OF UTILITIES, CALL 24 HOURS A DAY 1-800-257-7777, 48 HOURS IN ADVANCE OF ANY WORK IN THIS VICINITY.
18. THE TROUGH MUST HAVE REMOVABLE COVERS WITH PROVISIONS FOR SEALS., ALL REMOVABLE COVERS TO BE HANDLED BY ONE MAN.
19. THE MINIMUM MOUNTING HEIGHT FOR METERS IS 30 INCHES TO THE BOTTOM OF THE METER GLASS. MAXIMUM MOUNTING HEIGHT IS 66 INCHES TO THE BOTTOM OF THE GLASS.
20. ALL METERING CURRENT TRANSOFMER MOUNTING DIMENSIONS, DRILLING, SPACINGS, AND STUDS MUST COMPLY WITH PEPCO SPECIFICATION DRAWINGS 5-5-0606.1.1, 5-5-0695.2.3, 5-5-0695.3.3. THE MINIMUM ACCEPTABLE DIMENSIONS, DRILLING, ETC. FOR PEPCO LINE CONNECTIONS TO C/T CABINETS/COMPARTMENTS (INCLUDING SAFETY BARRIER WHERE APPLICABLE), MAINLINE SWITCHES AND MAIN INCOMING BUS CABINETS/COMPARTMENTS/SECTIONS ARE SHOWN ON PEPCO PURCHASE SPECIFICATION DRAWINGS 5-5-0606.1.1, 5-5-0695.2.3, 5-5-0695.3.3. REFER TO: HTTP://WWW.PEPCO.COM/BUSINESS/ AND GO TO APPROVED LV SWITCHGEAR (WWW.PEPCO.COM/_RES/DOCUMENTS/SWITCHGEAR.PDF).
21. HYLUGS USED BY PEPCO REQUIRE NEMA 2-HOLE SPACING.
22. PEPCO IS TO BE NOTIFIED 2 WEEKS (10 WORKING DAYS) BEFORE THE SETTING OF ANY POLES, MANHOLES, POURING OF ANY CONCRETE AND/OR THE BACKFILLING OF ANY TRENCH TO MAKE ARRANGEMENTS FOR THE INSPECTION AND APPROVAL OF YOUR ON SITE SERVICE CONNECTION STRUCTURAL EQUIPMENT. E-MAIL WAYNE JOSEY (WJOSEY@PEPCO.COM) TWO (2) WEEKS IN ADVANCE TO ARRANGE PRE-CONSTRUCTION MEETING AND SCHEDULE INSPECTION.
23. ALL OTHER UNDERGROUND UTILITIES IN THE VICINITY ARE TO BE SHOWN. THE MINIMUM LONGITUDNAL AND VERTICAL SEPARATION BETWEEN FOREIGN STRUCTURES AND CONDUIT SET BY PEPCO SHALL BE MAINTAINED:
    - TELEPHONE CONDUIT – 3" CONCRETE OR 12" EARTH
    - GAS CONDUIT UNDER 16" DIAMETER – 12"
    - GAS CONDUIT OVER 16" DIAMETER – 18"
    - WATER AND SEWER – 4' HORIZONTAL IN DC AND 5' HORIZONTAL IN MD, WITH 1' VERTICAL CLEARANCE. MAINTAIN 5'-0" MINIMUM (HORIZONTAL) AND 1'-0" (VERTICAL) CLEARANCE FROM ALL UNDERGROUND UTILITIES.
24. THE MAXIMUM SIZE OF A SERVICE CONDUCTOR RATED 600 VOLTS OR LESS SHALL NOT EXCEED 500 KCM FOR COPPER OR ALUMINUM CONDUCTOR. *REFER TO WWW.PEPCO.COM/BUSINESS FOR THE MOST UP TO DATE PEPCO STANDARD DRAWINGS AND CONSTRUCTION DETAILS AND SPECIFICATIONS.

DRAFT
NOT FOR CONSTRUCTION

JMT

NO.	REVISION	DATE	BY

MONTGOMERY COUNTY
DEPARTMENT OF TRANSPORTATION
GAITHERSBURG, MARYLAND

RECOMMENDED FOR APPROVAL

Chief, Design Section — Date

APPROVED

Chief, Division of Transportation Engineering — Date

Designed by: MDS Drawn by: MDS Checked by: JMC

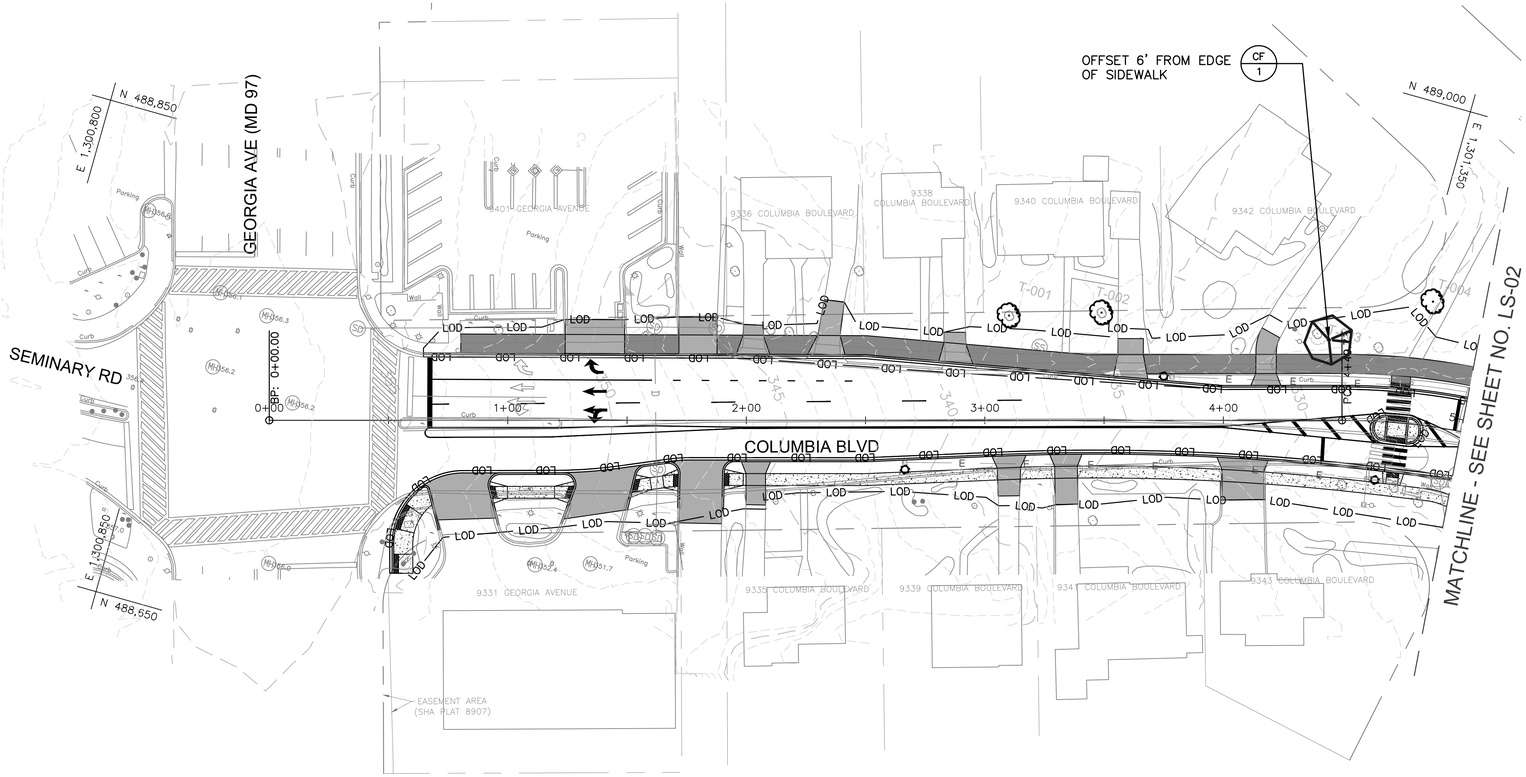
LT-11
LIGHTING DETAILS

DALE DRIVE
SHARED USE PATH

DATE: NOVEMBER 2022

CIP No. : 502109

SHEET 79 of 181



NOTES:

1. REFER TO SIGNING AND STRIPING PLAN FOR PAVEMENT MARKING DETAILS.
2. CONTRACTOR SHALL FIELD ADJUST GRADING TO PROVIDE SMOOTH TRANSITIONS INTO EXISTING FEATURES AND PROMOTE SHEET FLOW WHERE POSSIBLE. ALL GRADING CHANGES TO BE PRE-APPROVED BY COUNTY INSPECTOR.
3. INSTALL TREE DEER PROTECTION DEVICES AS PER DETAIL.
4. UNLESS OTHERWISE SPECIFIED, ALL DISTURBED AREAS SHALL BE STABILIZED WITH:
   - 4" OF TOPSOIL
   - TURFGRASS SEED MIX
     - 20% VIRGINIA WILD RYE
     - 20% RIPARIAN WILD RYE
     - 20% DEER TONGUE
     - 20% CREEPING RED FESCUE
     - 20% ANNUAL RYE
   - MULCH
5. REFER TO PLAN SHEET LS-09 FOR SPECIFIC NOTES PERTAINING TO TREE PRESERVATION, INVASIVE SPECIES, INSPECTIONS, AND TREE CANOPY INFORMATION.
6. PLEASE SEE SHEET LS-10 FOR TREE PLANTING DETAIL.

LEGEND

- LOD — LIMIT OF DISTURBANCE
- LIMIT OF GRADING
- TREE PROTECTION FENCE
- PROPOSED SHADE TREE
- PROPOSED FLOWERING TREE
- PROPOSED SHARED USE PATH
- EXISTING TREE
- PROPOSED LIGHTPOLE
- EXISTING SPECIMEN TREE (24" OR MORE DBH)

LANDSCAPE PLANT SCHEDULE THIS SHEET

KEY	QTY	BOTANICAL NAME	COMMON NAME	SIZE	ROOT	COMMENTS
TREES						
CF	1	CORNUS FLORIDA 'CHEROKEE PRINCESS'	'CHEROKEE PRINCESS' FLOWERING DOGWOOD	2.0" CAL.	B&B	AS SHOWN

DRAFT
NOT FOR CONSTRUCTION

JMT

NO.	REVISION	DATE	BY

MONTGOMERY COUNTY
DEPARTMENT OF TRANSPORTATION
GAITHERSBURG, MARYLAND

RECOMMENDED FOR APPROVAL

Chief, Design Section — Date

APPROVED

Chief, Division of Transportation Engineering — Date

Designed by: SJR Drawn by: SJR Checked by: JJR

LS-01
LANDSCAPE PLAN

DALE DRIVE SHARED USE PATH

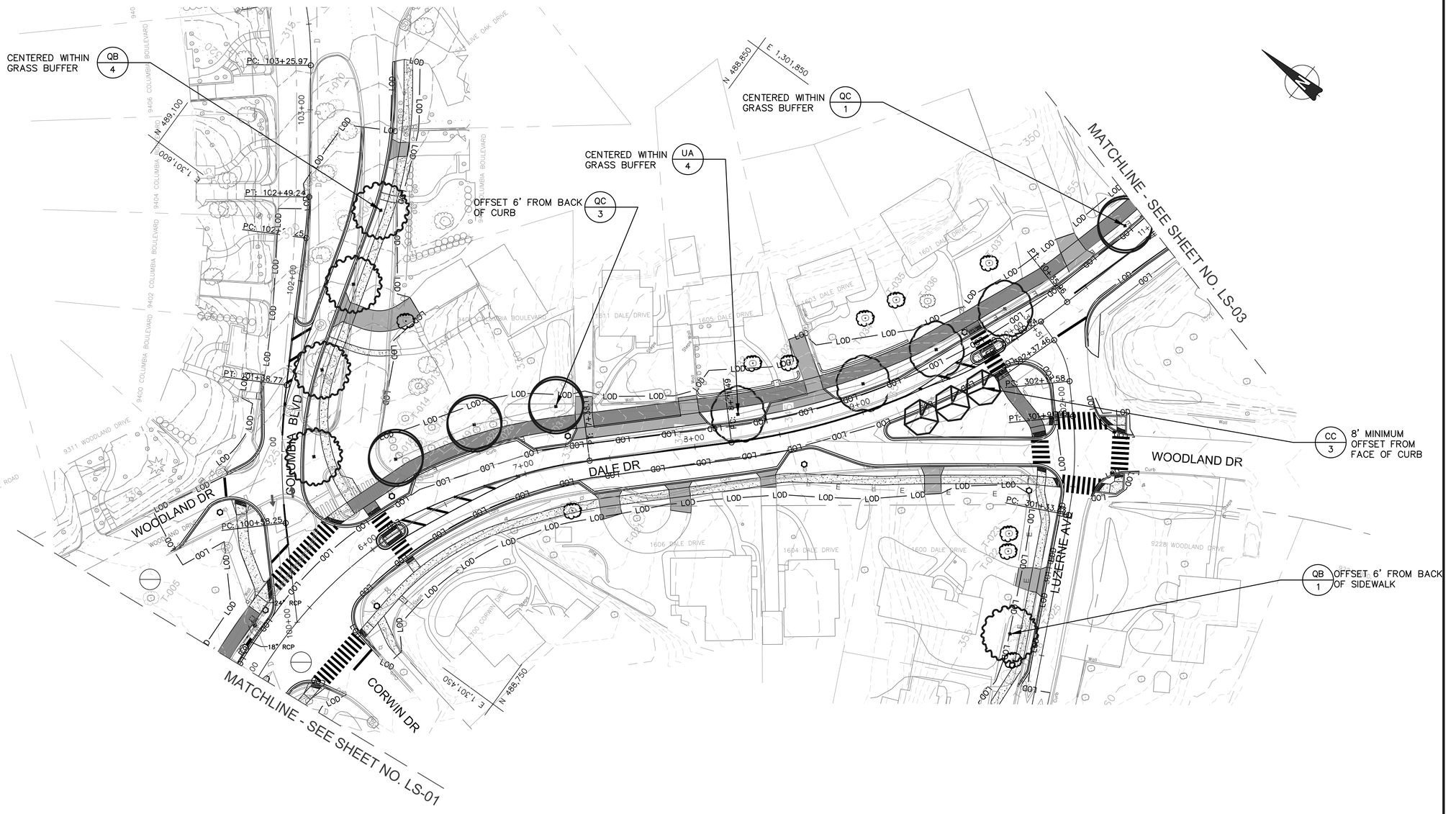
0 30' 60'
SCALE: 1"=30'

DATE: NOVEMBER 2022

CIP No.: 502109

SHEET 80 of 181

FILE NAME: Q:\2018\1804565_001_Dale_Drive_Pedestria\CADD\plLS_Dale.dwg LAYOUT NAME: LS-01 PLOTTED: Tuesday, November 22, 2022 - 3:02pm USER: AHavener



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3. INSTALL TREE DEER PROTECTION DEVICES AS PER DETAIL.
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   - 4" OF TOPSOIL
   - TURFGRASS SEED MIX
     - 20% VIRGINIA WILD RYE
     - 20% RIPARIAN WILD RYE
     - 20% DEER TONGUE
     - 20% CREEPING RED FESCUE
     - 20% ANNUAL RYE
   - MULCH
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6. PLEASE SEE SHEET LS-10 FOR TREE PLANTING DETAIL.

LEGEND

- LOD — LIMIT OF DISTURBANCE
- LIMIT OF GRADING
- TREE PROTECTION FENCE
- PROPOSED SHADE TREE
- PROPOSED FLOWERING TREE
- EXISTING TREE
- EXISTING SPECIMEN TREE (24" OR MORE DBH)
- PROPOSED SHARED USE PATH
- PROPOSED LIGHTPOLE

LANDSCAPE PLANT SCHEDULE

KEY	QTY	BOTANICAL NAME	COMMON NAME	SIZE	ROOT	COMMENTS
TREES						
CC	3	CERCIS CANADENSIS 'FOREST PANSY'	'FOREST PANSY' EASTERN REDBUD	2.5" CAL.	B&B	20' O.C., AS SHOWN
QB	5	QUERCUS BICOLOR	SWAMP WHITE OAK	2.5" CAL.	B&B	50' O.C., AS SHOWN
QC	4	QUERCUS COCCINEA	SCARLET OAK	2.5" CAL.	B&B	50' O.C., AS SHOWN
UA	4	ULMUS AMERICANA 'JEFFERSON'	'JEFFERSON' AMERICAN ELM	2.5" CAL.	B&B	50' O.C., AS SHOWN

DRAFT
NOT FOR CONSTRUCTION

JMT

NO.	REVISION	DATE	BY

MONTGOMERY COUNTY
DEPARTMENT OF TRANSPORTATION
GAITHERSBURG, MARYLAND

RECOMMENDED FOR APPROVAL

Chief, Design Section — Date

APPROVED

Chief, Division of Transportation Engineering — Date

Designed by: SJR Drawn by: SJR Checked by: JJR

LS-02
LANDSCAPE PLAN

DALE DRIVE SHARED USE PATH

0 30' 60'

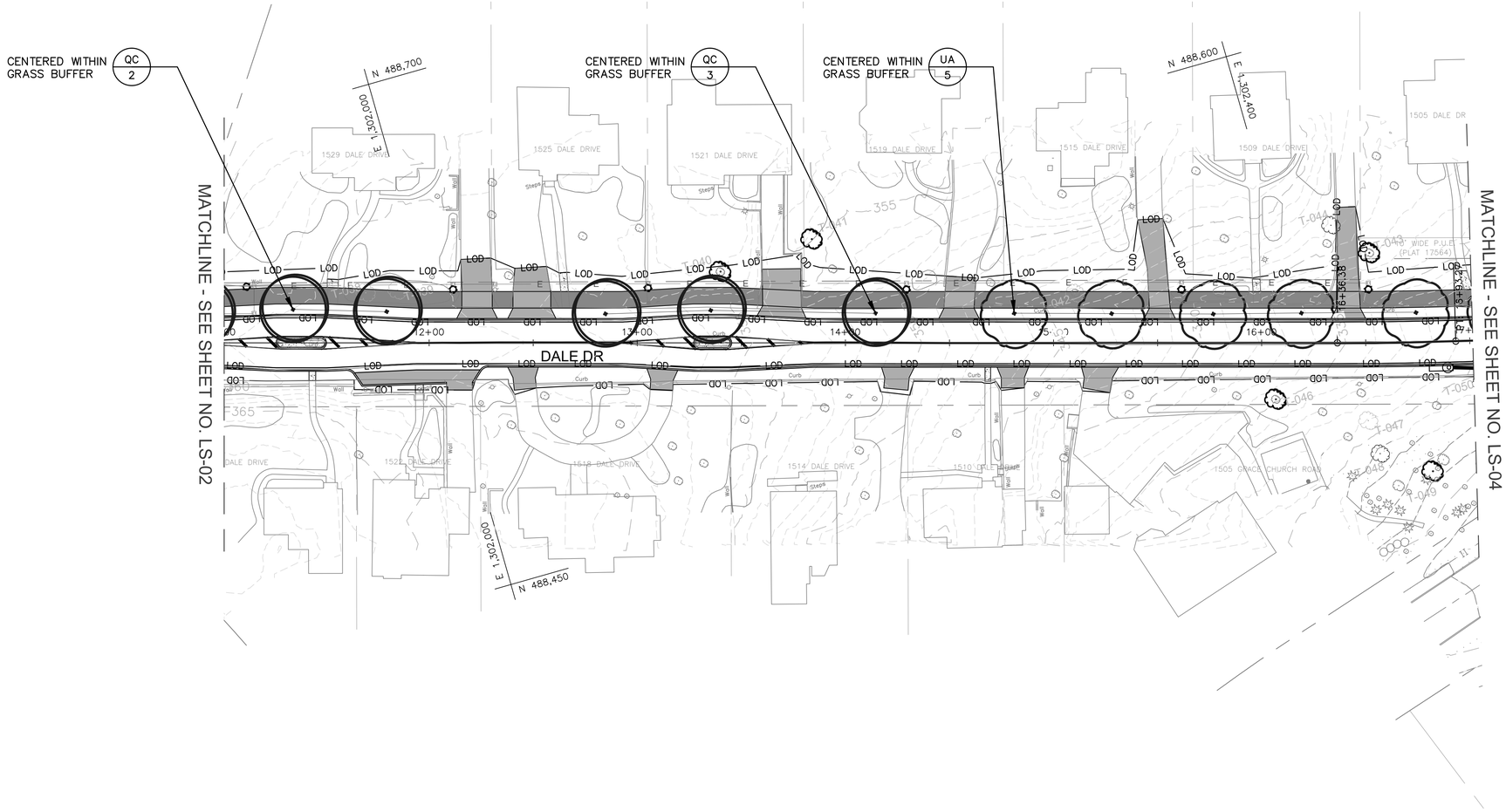
SCALE: 1"=30'

DATE: NOVEMBER 2022

CIP No.: 502109

SHEET 81 of 181

FILE NAME: Q:\2018\1804565_001_Dale_Drive_Pedestria\CADD\pLS_Dale.dwg LAYOUT NAME: LS-02 PLOTTED: Tuesday, November 22, 2022 - 3:03pm USER: AHovener



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3. INSTALL TREE DEER PROTECTION DEVICES AS PER DETAIL.
4. UNLESS OTHERWISE SPECIFIED, ALL DISTURBED AREAS SHALL BE STABILIZED WITH:
   - 4" OF TOPSOIL
   - TURFGRASS SEED MIX
     - 20% VIRGINIA WILD RYE
     - 20% RIPARIAN WILD RYE
     - 20% DEER TONGUE
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6. PLEASE SEE SHEET LS-10 FOR TREE PLANTING DETAIL.

LEGEND

- LOD — LIMIT OF DISTURBANCE
- LIMIT OF GRADING
- TREE PROTECTION FENCE
- PROPOSED SHADE TREE
- PROPOSED FLOWERING TREE
- PROPOSED SHARED USE PATH
- EXISTING TREE
- PROPOSED LIGHTPOLE
- EXISTING SPECIMEN TREE (24" OR MORE DBH)

LANDSCAPE PLANT SCHEDULE THIS SHEET

KEY	QTY	BOTANICAL NAME	COMMON NAME	SIZE	ROOT	COMMENTS
TREES						
QC	5	QUERCUS COCCINEA	SCARLET OAK	2.5" CAL.	B&B	50' O.C., AS SHOWN
UA	5	ULMUS AMERICANA 'JEFFERSON'	'JEFFERSON' AMERICAN ELM	2.5" CAL.	B&B	50' O.C., AS SHOWN

DRAFT
NOT FOR CONSTRUCTION

JMT

NO.	REVISION	DATE	BY

MONTGOMERY COUNTY
DEPARTMENT OF TRANSPORTATION
GAITHERSBURG, MARYLAND

RECOMMENDED FOR APPROVAL

Chief, Design Section — Date

APPROVED

Chief, Division of Transportation Engineering — Date

Designed by: SJR Drawn by: SJR Checked by: JJR

LS-03
LANDSCAPE PLAN

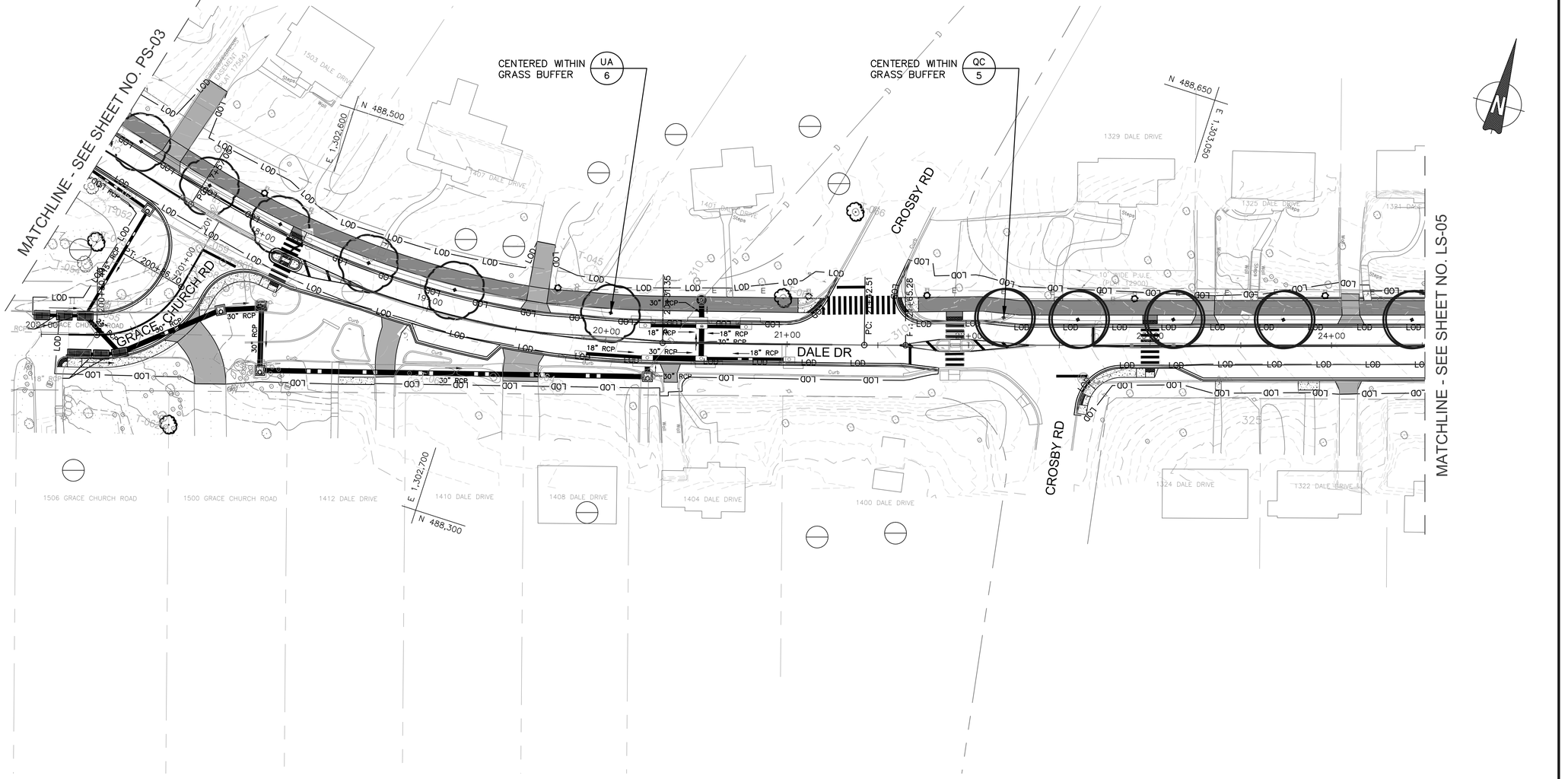
DALE DRIVE SHARED USE PATH

0 30' 60'
SCALE: 1"=30'

DATE: NOVEMBER 2022

CIP No.: 502109

SHEET 82 of 181



NOTES:

1. REFER TO SIGNING AND STRIPING PLAN FOR PAVEMENT MARKING DETAILS.
2. CONTRACTOR SHALL FIELD ADJUST GRADING TO PROVIDE SMOOTH TRANSITIONS INTO EXISTING FEATURES AND PROMOTE SHEET FLOW WHERE POSSIBLE. ALL GRADING CHANGES TO BE PRE-APPROVED BY COUNTY INSPECTOR.
3. INSTALL TREE DEER PROTECTION DEVICES AS PER DETAIL.
4. UNLESS OTHERWISE SPECIFIED, ALL DISTURBED AREAS SHALL BE STABILIZED WITH:
   - 4" OF TOPSOIL
   - TURFGRASS SEED MIX
     - 20% VIRGINIA WILD RYE
     - 20% RIPARIAN WILD RYE
     - 20% DEER TONGUE
     - 20% CREEPING RED FESCUE
     - 20% ANNUAL RYE
   - MULCH
5. REFER TO PLAN SHEET LS-09 FOR SPECIFIC NOTES PERTAINING TO TREE PRESERVATION, INVASIVE SPECIES, INSPECTIONS, AND TREE CANOPY INFORMATION.
6. PLEASE SEE SHEET LS-10 FOR TREE PLANTING DETAIL.

LEGEND

- LOD — LIMIT OF DISTURBANCE
- LIMIT OF GRADING
- TREE PROTECTION FENCE
- PROPOSED SHADE TREE
- PROPOSED FLOWERING TREE
- EXISTING TREE
- EXISTING SPECIMEN TREE (24" OR MORE DBH)
- PROPOSED SHARED USE PATH
- PROPOSED LIGHTPOLE

LANDSCAPE PLANT SCHEDULE THIS SHEET

KEY	QTY	BOTANICAL NAME	COMMON NAME	SIZE	ROOT	COMMENTS
TREES						
QC	5	QUERCUS COCCINEA	SCARLET OAK	2.5" CAL.	B&B	50' O.C., AS SHOWN
UA	6	ULMUS AMERICANA 'JEFFERSON'	'JEFFERSON' AMERICAN ELM	2.5" CAL.	B&B	50' O.C., AS SHOWN

DRAFT
NOT FOR CONSTRUCTION

JMT

NO.	REVISION	DATE	BY

MONTGOMERY COUNTY
DEPARTMENT OF TRANSPORTATION
GAITHERSBURG, MARYLAND

RECOMMENDED FOR APPROVAL

Chief, Design Section — Date

APPROVED

Chief, Division of Transportation Engineering — Date

Designed by: SJR Drawn by: SJR Checked by: JJR

LS-04
LANDSCAPE PLAN

DALE DRIVE
SHARED USE PATH

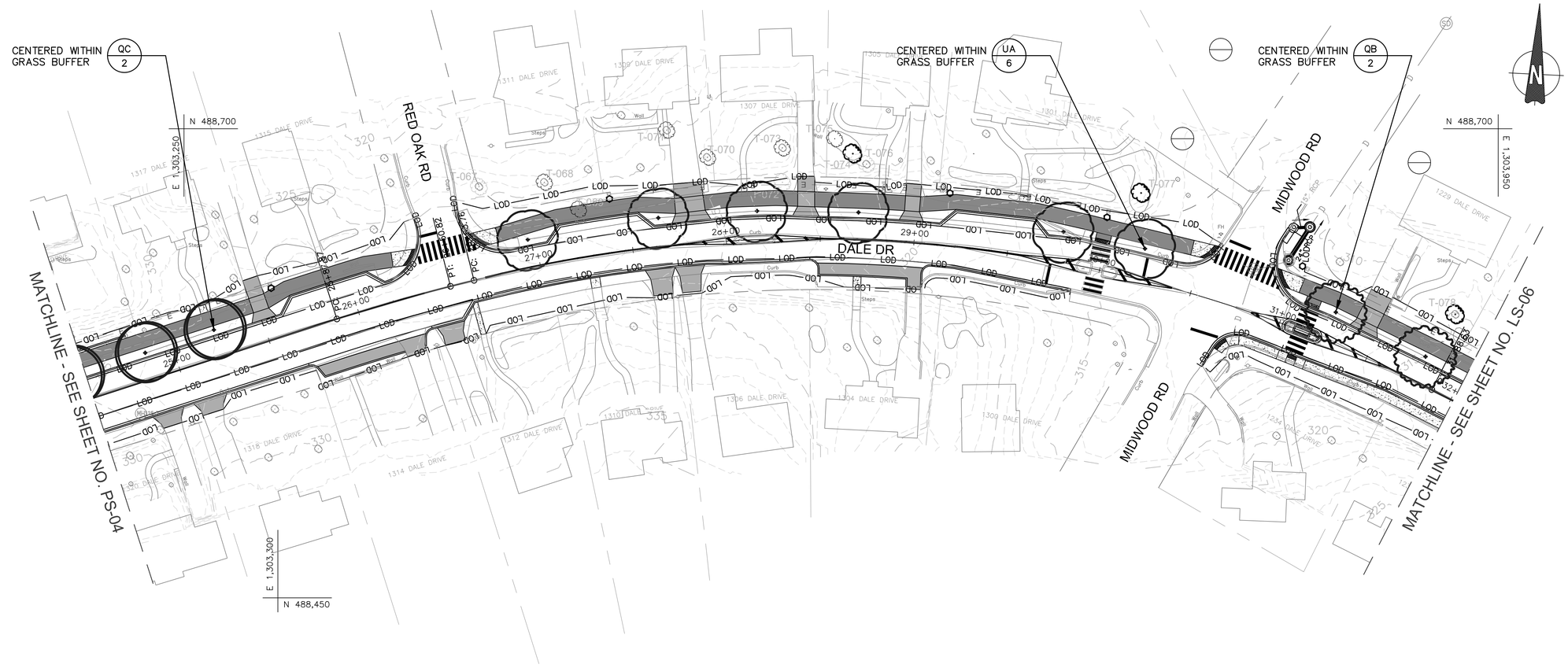
0 30' 60'
SCALE: 1"=30'

DATE: NOVEMBER 2022

CIP No.: 502109

SHEET 83 of 181

FILE NAME: Q:\2018\1804565_001_Dale_Drive_Pedestria\CADD\pLS_Dale.dwg LAYOUT NAME: LS-04 PLOTTED: Tuesday, November 22, 2022 - 3:03pm USER: AHavener



NOTES:

1. REFER TO SIGNING AND STRIPING PLAN FOR PAVEMENT MARKING DETAILS.
2. CONTRACTOR SHALL FIELD ADJUST GRADING TO PROVIDE SMOOTH TRANSITIONS INTO EXISTING FEATURES AND PROMOTE SHEET FLOW WHERE POSSIBLE. ALL GRADING CHANGES TO BE PRE-APPROVED BY COUNTY INSPECTOR.
3. INSTALL TREE DEER PROTECTION DEVICES AS PER DETAIL.
4. UNLESS OTHERWISE SPECIFIED, ALL DISTURBED AREAS SHALL BE STABILIZED WITH:
   - 4" OF TOPSOIL
   - TURFGRASS SEED MIX
     - 20% VIRGINIA WILD RYE
     - 20% RIPARIAN WILD RYE
     - 20% DEER TONGUE
     - 20% CREEPING RED FESCUE
     - 20% ANNUAL RYE
   - MULCH
5. REFER TO PLAN SHEET LS-09 FOR SPECIFIC NOTES PERTAINING TO TREE PRESERVATION, INVASIVE SPECIES, INSPECTIONS, AND TREE CANOPY INFORMATION.
6. PLEASE SEE SHEET LS-10 FOR TREE PLANTING DETAIL.

LEGEND

- LOD — LIMIT OF DISTURBANCE
- LIMIT OF GRADING
- TREE PROTECTION FENCE
- PROPOSED SHADE TREE
- PROPOSED FLOWERING TREE
- EXISTING TREE
- EXISTING SPECIMEN TREE (24" OR MORE DBH)
- PROPOSED SHARED USE PATH
- PROPOSED LIGHTPOLE

LANDSCAPE PLANT SCHEDULE THIS SHEET

KEY	QTY	BOTANICAL NAME	COMMON NAME	SIZE	ROOT	COMMENTS
TREES						
QB	2	QUERCUS BICOLOR	SWAMP WHITE OAK	2.5" CAL.	B&B	50' O.C., AS SHOWN
QC	2	QUERCUS COCCINEA	SCARLET OAK	2.5" CAL.	B&B	50' O.C., AS SHOWN
UA	6	ULMUS AMERICANA 'JEFFERSON'	'JEFFERSON' AMERICAN ELM	2.5" CAL.	B&B	50' O.C., AS SHOWN

DRAFT
NOT FOR CONSTRUCTION

JMT

NO.	REVISION	DATE	BY

MONTGOMERY COUNTY
DEPARTMENT OF TRANSPORTATION
GAITHERSBURG, MARYLAND

RECOMMENDED FOR APPROVAL

Chief, Design Section — Date

APPROVED

Chief, Division of Transportation Engineering — Date

Designed by: SJR Drawn by: SJR Checked by: JJR

LS-05
LANDSCAPE PLAN

DALE DRIVE SHARED USE PATH

0 30' 60'

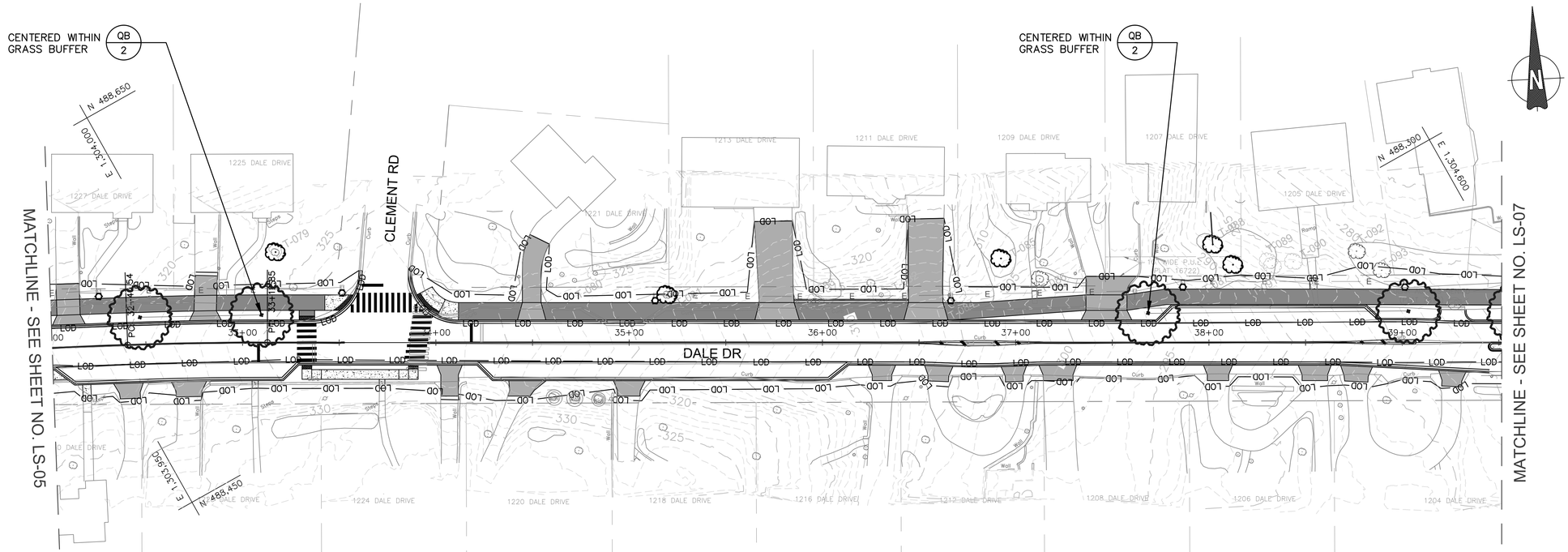
SCALE: 1"=30'

DATE: NOVEMBER 2022

CIP No. : 502109

SHEET 84 of 181

FILE NAME: Q:\2018\1804565_001_Dale_Drive_Pedestria\CADD\pLS_Dale.dwg LAYOUT NAME: LS-05 PLOTTED: Tuesday, November 22, 2022 - 3:04pm USER: AHavener



NOTES:

1. REFER TO SIGNING AND STRIPING PLAN FOR PAVEMENT MARKING DETAILS.
2. CONTRACTOR SHALL FIELD ADJUST GRADING TO PROVIDE SMOOTH TRANSITIONS INTO EXISTING FEATURES AND PROMOTE SHEET FLOW WHERE POSSIBLE. ALL GRADING CHANGES TO BE PRE-APPROVED BY COUNTY INSPECTOR.
3. INSTALL TREE DEER PROTECTION DEVICES AS PER DETAIL.
4. UNLESS OTHERWISE SPECIFIED, ALL DISTURBED AREAS SHALL BE STABILIZED WITH:
   - 4" OF TOPSOIL
   - TURFGRASS SEED MIX
     - 20% VIRGINIA WILD RYE
     - 20% RIPARIAN WILD RYE
     - 20% DEER TONGUE
     - 20% CREEPING RED FESCUE
     - 20% ANNUAL RYE
   - MULCH
5. REFER TO PLAN SHEET LS-09 FOR SPECIFIC NOTES PERTAINING TO TREE PRESERVATION, INVASIVE SPECIES, INSPECTIONS, AND TREE CANOPY INFORMATION.
6. PLEASE SEE SHEET LS-10 FOR TREE PLANTING DETAIL.

LEGEND

- LOD — LIMIT OF DISTURBANCE
- LIMIT OF GRADING
- TREE PROTECTION FENCE
- PROPOSED SHADE TREE
- PROPOSED FLOWERING TREE
- PROPOSED SHARED USE PATH
- EXISTING TREE
- PROPOSED LIGHTPOLE
- EXISTING SPECIMEN TREE (24" OR MORE DBH)

LANDSCAPE PLANT SCHEDULE THIS SHEET

KEY	QTY	BOTANICAL NAME	COMMON NAME	SIZE	ROOT	COMMENTS
TREES						
QB	4	QUERCUS BICOLOR	SWAMP WHITE OAK	2.5" CAL.	B&B	50' O.C., AS SHOWN

DRAFT
NOT FOR CONSTRUCTION

JMT

NO.	REVISION	DATE	BY

MONTGOMERY COUNTY
DEPARTMENT OF TRANSPORTATION
GAITHERSBURG, MARYLAND

RECOMMENDED FOR APPROVAL

Chief, Design Section — Date

APPROVED

Chief, Division of Transportation Engineering — Date

Designed by: SJR Drawn by: SJR Checked by: JJR

LS-06
LANDSCAPE PLAN

DALE DRIVE SHARED USE PATH

0 30' 60'

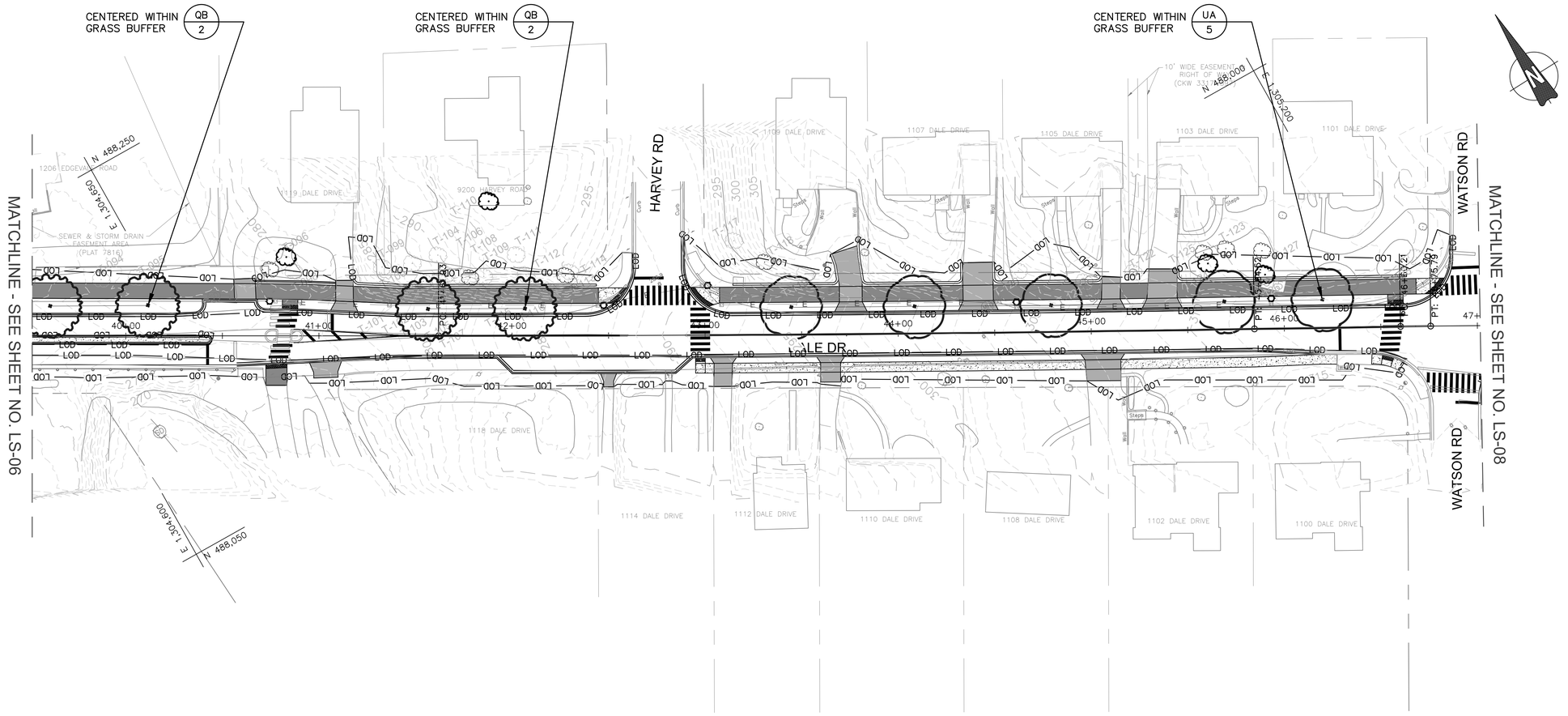
SCALE: 1"=30'

DATE: NOVEMBER 2022

CIP No.: 502109

SHEET 85 of 181

FILE NAME: Q:\2018\1804565_001_Dale_Drive_Pedestria\CADD\pLS_Dale.dwg LAYOUT NAME: LS-06 PLOTTED: Tuesday, November 22, 2022 - 3:04pm USER: AHavener



NOTES:

1. REFER TO SIGNING AND STRIPING PLAN FOR PAVEMENT MARKING DETAILS.
2. CONTRACTOR SHALL FIELD ADJUST GRADING TO PROVIDE SMOOTH TRANSITIONS INTO EXISTING FEATURES AND PROMOTE SHEET FLOW WHERE POSSIBLE. ALL GRADING CHANGES TO BE PRE-APPROVED BY COUNTY INSPECTOR.
3. INSTALL TREE DEER PROTECTION DEVICES AS PER DETAIL.
4. UNLESS OTHERWISE SPECIFIED, ALL DISTURBED AREAS SHALL BE STABILIZED WITH:
   - 4" OF TOPSOIL
   - TURFGRASS SEED MIX
     - 20% VIRGINIA WILD RYE
     - 20% RIPARIAN WILD RYE
     - 20% DEER TONGUE
     - 20% CREEPING RED FESCUE
     - 20% ANNUAL RYE
   - MULCH
5. REFER TO PLAN SHEET LS-09 FOR SPECIFIC NOTES PERTAINING TO TREE PRESERVATION, INVASIVE SPECIES, INSPECTIONS, AND TREE CANOPY INFORMATION.
6. PLEASE SEE SHEET LS-10 FOR TREE PLANTING DETAIL.

LEGEND

- LOD — LIMIT OF DISTURBANCE
- LIMIT OF GRADING
- TREE PROTECTION FENCE
- PROPOSED SHADE TREE
- PROPOSED FLOWERING TREE
- EXISTING TREE
- EXISTING SPECIMEN TREE (24" OR MORE DBH)
- PROPOSED SHARED USE PATH
- PROPOSED LIGHTPOLE

LANDSCAPE PLANT SCHEDULE THIS SHEET

KEY	QTY	BOTANICAL NAME	COMMON NAME	SIZE	ROOT	COMMENTS
TREES						
QB	4	QUERCUS BICOLOR	SWAMP WHITE OAK	2.5" CAL.	B&B	50' O.C., AS SHOWN
UA	5	ULMUS AMERICANA 'JEFFERSON'	'JEFFERSON' AMERICAN ELM	2.5" CAL.	B&B	50' O.C., AS SHOWN

DRAFT
NOT FOR CONSTRUCTION

JMT

NO.	REVISION	DATE	BY

MONTGOMERY COUNTY
DEPARTMENT OF TRANSPORTATION
GAITHERSBURG, MARYLAND

RECOMMENDED FOR APPROVAL

Chief, Design Section — Date

APPROVED

Chief, Division of Transportation Engineering — Date

Designed by: SJR Drawn by: SJR Checked by: JJR

LS-07
LANDSCAPE PLAN

DALE DRIVE SHARED USE PATH

0 30' 60'

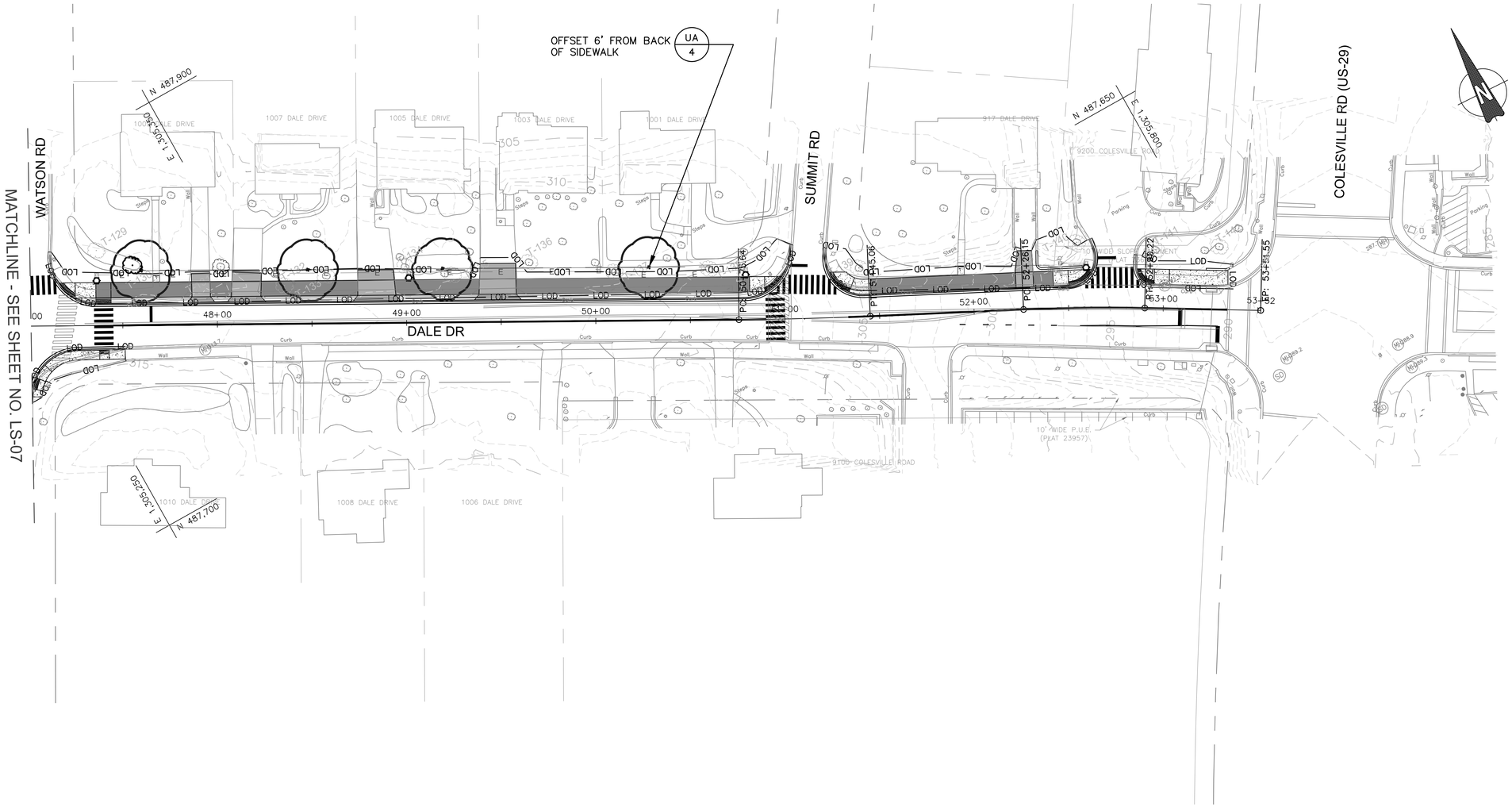
SCALE: 1"=30'

DATE: NOVEMBER 2022

CIP No. : 502109

SHEET 86 of 181

FILE NAME: Q:\2018\1804565_001_Dale_Drive_Pedestria\CADD\pLS_Dale.dwg LAYOUT NAME: LS-07 PLOTTED: Tuesday, November 22, 2022 - 3:05pm USER: AHovener


OFFSET 6' FROM BACK OF SIDEWALK
UA 4
WATSON RD
SUMMIT RD
COLESVILLE RD (US-29)
DALE DR
MATCHLINE - SEE SHEET NO. LS-07
N 487,900
E 1,305,350
N 487,700
E 1,305,250
N 487,650
E 1,305,800
1009 DALE DRIVE
1007 DALE DRIVE
1005 DALE DRIVE
1003 DALE DRIVE
1001 DALE DRIVE
1010 DALE DRIVE
1008 DALE DRIVE
1006 DALE DRIVE
317 DALE DRIVE
9200 COLESVILLE ROAD
9100 COLESVILLE ROAD
10' WIDE P.U.E. (PLAT 23957)
LOD
48+00
49+00
50+00
52+00
53+00
PC: 50+75.64
PT: 51+15.06
PC: 52+28.15
PT: 52+80.22
PT: 53+51.55
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T-168

TREE PRESERVATION NOTES

1. ALL WORK PERFORMED SHALL MEET OR EXCEED INDUSTRY STANDARDS AS MOST RECENTLY PUBLISHED BY THE INTERNATIONAL SOCIETY OF ARBORICULTURE (ISA), AMERICAN NATIONAL STANDARDS INSTITUTE (ANSI), OR THE TREE CARE INDUSTRY ASSOCIATION (TCIA). IN THE EVENT TREATMENTS PRESCRIBED ARE NOT COVERED BY AN EXISTING STANDARD, WORK SHALL MEET OR EXCEED STANDARDS APPROVED BY THE COUNTY ARBORIST.
2. TREES DESIGNATED FOR REMOVAL ALONG THE LIMITS OF DISTURBANCE SHALL BE REMOVED USING A CHAINSAW TO AVOID DAMAGE TO SURROUNDING TREES TO BE PRESERVED AND UNDERSTORY VEGETATION. IF A STUMP MUST BE REMOVED, THIS SHALL BE DONE ONLY WITH THE APPROVAL OF THE COUNTY ARBORIST USING A STUMP-GRINDING MACHINE IN A MANNER THAT CAUSES AS LITTLE DISTURBANCE AS POSSIBLE TO ADJACENT TREES, VEGETATION AND SOIL CONDITIONS.
3. ROOT PRUNING SHALL BE PERFORMED, AS NEEDED, TO COMPLY WITH THE FOREST CONSERVATION REQUIREMENTS OF THESE DEVELOPMENT CONDITIONS. ALL TREATMENTS SHALL BE CLEARLY IDENTIFIED, LABELED, AND DETAILED ON THE TREE PRESERVATION AND LANDSCAPE SHEETS OF THE PLAN SUBMISSION. THE DETAILS FOR THESE TREATMENTS SHALL BE REVIEWED AND APPROVED BY THE COUNTY ARBORIST, ACCOMPLISHED IN A MANNER THAT PROTECTS AFFECTED AND ADJACENT VEGETATION TO BE PRESERVED. ROOT PRUNING DETAILS MAY INCLUDE, BUT ARE NOT LIMITED TO, THE FOLLOWING: (1) ROOT PRUNING SHALL BE DONE WITH A TRENCHER OR VIBRATORY PLOW TO A DEPTH OF 18 INCHES; (2) ROOT PRUNING SHALL TAKE PLACE PRIOR TO ANY CLEARING AND GRADING AND/OR INSTALLATION OF SUPER SILT FENCE, DIVERSION FENCE OR TREE PROTECTION FENCE; (3) ROOT PRUNING SHALL BE CONDUCTED WITH THE SUPERVISION OF THE COUNTY ARBORIST; AND (4) THE COUNTY ARBORIST SHALL BE INFORMED WHEN ALL ROOT PRUNING AND TREE PROTECTION FENCE INSTALLATION IS COMPLETE.
4. IMMEDIATELY AFTER THE E&S ACTIVITIES ARE COMPLETE, TREES INDICATED FOR MULCHING IN THE TREE INVENTORY SHALL BE MULCHED TO PROTECT THE ROOTS AND RETAIN MOISTURE. HARDWOOD CHIPS OR SHREDDED MULCH SHALL BE APPLIED AT A MAXIMUM DEPTH OF 4 INCHES AROUND THESE SPECIFIC TREES AND ONLY WITHIN 10 FEET OF THE LIMITS OF DISTURBANCE. ADDITIONAL AREAS MAY BE MULCHED AS PART OF THE INVASIVE SPECIES MANAGEMENT, SEE INVASIVE SPECIES MANAGEMENT NOTES, THIS SHEET.
5. ALL CONSTRUCTION ACTIVITY BEYOND THE LIMITS OF DISTURBANCE SHOWN ON THE PLAN SHALL BE PROHIBITED UNLESS PREVIOUSLY APPROVED. THE STORAGE OF EQUIPMENT, MATERIALS, CHEMICALS, AND DEBRIS AS WELL AS VEHICULAR TRAFFIC OR THE PARKING OF VEHICLES SHALL NOT BE PERMITTED WITHIN TREE PRESERVATION AREAS.
6. THE SERVICES OF THE PROJECT SURVEYOR SHALL BE RETAINED TO HAVE THE LIMITS OF CLEARING AND GRADING IN THE AREAS OF TREE PRESERVATION MARKED WITH A CONTINUOUS LINE OF FLAGGING PRIOR TO THE WALK-THROUGH MEETING TO BE HELD PRIOR TO ANY CLEARING AND GRADING. DURING THE TREE PRESERVATION WALK-THROUGH MEETING, THE COUNTY ARBORIST SHALL WALK SUCH LIMITS OF CLEARING AND GRADING WITH INSPECTORS TO DETERMINE WHERE ADJUSTMENTS TO THE CLEARING LIMITS CAN BE MADE TO INCREASE THE AREA OF TREE PRESERVATION AND/OR TO INCREASE THE SURVIVABILITY OF TREES AT THE EDGE OF THE LIMITS OF CLEARING AND GRADING. SUCH ADJUSTMENT SHALL BE IMPLEMENTED; PROVIDED, HOWEVER, THAT NO ADJUSTMENT SHALL BE REQUIRED THAT WOULD AFFECT THE LOCATION AND/OR DESIGN OF THE DEVELOPMENT, INCLUDING A REQUIREMENT FOR ADDITIONAL RETAINING WALLS. TREES WITHIN THE PRESERVATION AREAS THAT ARE IDENTIFIED SPECIFICALLY BY THE COUNTY ARBORIST IN WRITING AS DEAD OR DYING MAY BE REMOVED AS PART OF THE CLEARING OPERATION. ANY TREE THAT IS SO DESIGNATED SHALL BE REMOVED USING A CHAIN SAW AND SUCH REMOVAL SHALL BE ACCOMPLISHED IN A MANNER THAT AVOIDS DAMAGE TO SURROUNDING TREES AND ASSOCIATED UNDERSTORY VEGETATION. IF A STUMP MUST BE REMOVED, THIS SHALL BE DONE USING A STUMP-GRINDING MACHINE IN A MANNER CAUSING AS LITTLE DISTURBANCE AS POSSIBLE TO ADJACENT TREES AND ASSOCIATED UNDERSTORY VEGETATION AND SOIL CONDITIONS.
7. THE LIMITS OF CLEARING AND GRADING SHALL BE STRICTLY CONFORMED TO, AS SHOWN ON THE PLAN, SUBJECT TO ALLOWANCES SPECIFIED IN THESE DEVELOPMENT CONDITIONS AND FOR THE INSTALLATION OF FENCES AND/OR UTILITIES AS DETERMINED NECESSARY BY THE COUNTY ARBORIST. IF IT IS DETERMINED NECESSARY TO INSTALL FENCES AND/OR UTILITIES IN AREAS PROTECTED BY THE LIMITS OF CLEARING AND GRADING AS SHOWN ON THE PLAN, THEY SHALL BE LOCATED IN THE LEAST DISRUPTIVE MANNER NECESSARY AS DETERMINED BY THE COUNTY ARBORIST.
8. DURING ANY CLEARING OR TREE/VEGETATION REMOVAL IN THE AREAS ADJACENT TO THE TREE PRESERVATION AREAS, THE COUNTY ARBORIST SHALL BE PRESENT TO MONITOR THE PROCESS AND ENSURE THAT THE ACTIVITIES ARE CONDUCTED AS CONDITIONED. MONITORING VISITS SHALL BE CONDUCTED WEEKLY DURING E&S INSTALLATION (CLEARING AND GRADING) CONSTRUCTION AND MONTHLY THEREAFTER UNTIL PROJECT COMPLETION.
9. ALL TREES SHOWN TO BE PRESERVED ON THE FOREST CONSERVATION PLAN SHALL BE PROTECTED BY TREE PROTECTION FENCE. TREE PROTECTION FENCING OR SUPER SILT FENCING SHALL BE ERECTED AT THE LIMITS OF CLEARING AND GRADING ADJACENT TO THE TREE PRESERVATION AREAS AS SHOWN ON THE PLANS, AS MAY BE MODIFIED BY THE DEVELOPMENT CONDITIONS BELOW. SUPER SILT FENCE ADJACENT TO MAJOR ROOTS OF TREES MAY BE NOTCHED, AS APPROVED, BY THE DPS INSPECTOR IN THE FIELD. ALL TREE PROTECTION FENCING SHALL BE INSTALLED AFTER THE TREE PRESERVATION WALK-THROUGH MEETING BUT PRIOR TO ANY CLEARING AND GRADING ACTIVITIES. THE INSTALLATION OF ALL TREE PROTECTION FENCING SHALL BE PERFORMED UNDER THE SUPERVISION OF THE COUNTY ARBORIST, AND ACCOMPLISHED IN A MANNER THAT DOES NOT HARM EXISTING VEGETATION THAT IS TO BE PRESERVED.
10. SIGNS STATING "TREE PRESERVATION AREA" SHALL BE AFFIXED TO THE TREE PRESERVATION FENCE AT LEAST EVERY 30 FEET. SIGNS SHALL INCLUDE BOTH ENGLISH AND SPANISH AS SHOWN ON DETAIL.

STANDARD TREE CANOPY NOTES

ANY SHADE TREE PLANTED TO COMPLY WITH CHAPTER 55 OF THE COUNTY CODE MUST CONFORM TO THE FOLLOWING:

1. EACH SHADE TREE MUST MEET THE REQUIREMENTS FOR PLANT MATERIAL IN ANSI Z60.1;
2. EACH SHADE TREE MUST BE A MINIMUM OF 2" CALIPER;
3. INSTALLATION OF EACH SHADE TREE MUST MEET ALL REQUIREMENTS OF ANSI A300;
4. AT THE TIME OF PLANTING:
   a. TREE GUARDS TO PROTECT TREES FROM DEER RUBBING, MOWERS, WEED EATERS, OTHER EQUIPMENT AND LARGE RODENTS MUST BE INSTALLED ON ALL SHADE TREES;
   b. MULCH MUST BE APPLIED;
   c. SUFFICIENT WATER MUST BE APPLIED TO AID IN PROPER PLANTING.
5. SHADE TREES MUST BE INSTALLED BETWEEN OCTOBER 15TH AND MAY 15TH AS LONG AS THE GROUND IS NOT FROZEN, SATURATED, OR COVERED WITH SNOW SUCH THAT A SUITABLE HOLE CANNOT BE DUG;
6. SHADE TREES MUST NOT BE INSTALLED BETWEEN MAY 16TH AND OCTOBER 14TH OF EACH YEAR. IF INSTALLATION CANNOT OCCUR BETWEEN OCTOBER 15TH AND MAY 15TH FOR ANY REASON, OR IF PROPOSED TREES ARE NOT PLANTED FOR ANY OTHER REASON, THE PERMITTEE MUST PAY THE REQUIRED FEE IN LIEU.
7. IF SHADE TREES ARE INSTALLED PRIOR TO FINAL STABILIZATION OF THE LAND DISTURBING ACTIVITY THEN NO ADDITIONAL DISTURBANCE MUST OCCUR WITHIN FIVE FEET OF THE STEM OF THE TREE. PROTECTIVE FENCING MUST BE INSTALLED AT THE EDGE OF THIS AREA AT THE SAME TIME THE TREE IS INSTALLED AND MUST REMAIN IN PLACE UNTIL FINAL STABILIZATION OCCURS.
8. THE LOCATION OF GROWING ZONES AND PLANTING AREAS MUST BE CLEARLY MARKED IN THE FIELD PRIOR TO INSTALLATION OF ANY SHADE TREE.
9. A COPY OF THE APPROVED SEDIMENT CONTROL PLAN SHOWING ALL APPROVED GROWING ZONES AND PLANTING AREAS MUST BE AVAILABLE ON THE SITE AT ALL TIMES.
10. AT LEAST ONE INSPECTION MUST OCCUR AFTER ALL CONSTRUCTION ACTIVITIES ARE COMPLETED TO DETERMINE THE LEVEL OF COMPLIANCE WITH SHADE TREE PLANTING REQUIREMENTS.

INSPECTIONS NOTES

1. ALL FIELD INSPECTIONS MUST BE REQUESTED BY THE APPLICANT. INSPECTIONS MUST BE CONDUCTED AS FOLLOWS:
   a. AFTER THE LIMITS OF DISTURBANCE HAVE BEEN STAKED AND FLAGGED, BUT BEFORE ANY CLEARING OR GRADING BEGINS
   b. AFTER NECESSARY STRESS REDUCTION MEASURES HAVE BEEN COMPLETED AND PROTECTION MEASURES HAVE BEEN INSTALLED, BUT BEFORE ANY CLEARING AND GRADING BEGIN
   c. AFTER COMPLETION OF ALL CONSTRUCTION ACTIVITIES, BUT BEFORE REMOVAL OF TREE PROTECTION FENCING, TO DETERMINE THE LEVEL OF COMPLIANCE WITH THE PROVISION OF THE FOREST CONSERVATION.

DRAFT
NOT FOR CONSTRUCTION

JMT

NO.	REVISION	DATE	BY

MONTGOMERY COUNTY
DEPARTMENT OF TRANSPORTATION
GAITHERSBURG, MARYLAND

RECOMMENDED FOR APPROVAL

Chief, Design Section — Date

APPROVED

Chief, Division of Transportation Engineering — Date

Designed by: SJR Drawn by: SJR Checked by: JJR

LS-09
LANDSCAPE NOTES

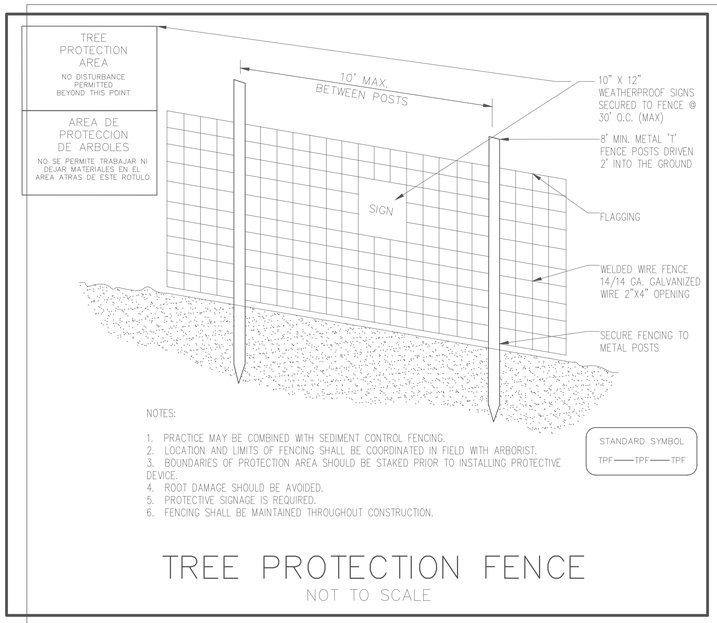
DALE DRIVE
SHARED USE PATH

0 30' 60'
SCALE: 1"=30'

DATE: NOVEMBER 2022

CIP No. : 502109

SHEET 88 of 181

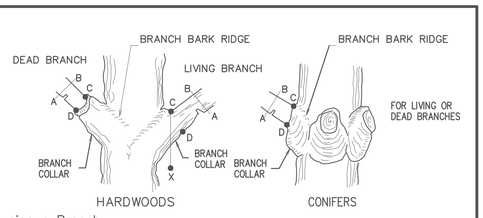


TREE PROTECTION FENCE

NOT TO SCALE

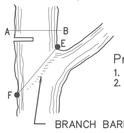
LANDSCAPE PLANT SCHEDULE TOTAL

KEY	QTY	BOTANICAL NAME	COMMON NAME	SIZE	ROOT	COMMENTS
TREES						
CC	3	CERCIS CANADENSIS 'FOREST PANSY'	'FOREST PANSY' EASTERN REDBUD	2.5" CAL.	B&B	20' O.C., AS SHOWN
CF	1	CORNUS FLORIDA 'CHEROKEE PRINCESS'	'CHEROKEE PRINCESS' FLOWERING DOGWOOD	2.0" CAL.	B&B	AS SHOWN
QB	15	QUERCUS BICOLOR	SWAMP WHITE OAK	2.5" CAL.	B&B	50' O.C., AS SHOWN
QC	16	QUERCUS COCCINEA	SCARLET OAK	2.5" CAL.	B&B	50' O.C., AS SHOWN
UA	30	ULMUS AMERICANA 'JEFFERSON'	'JEFFERSON' AMERICAN ELM	2.5" CAL.	B&B	50' O.C., AS SHOWN



Pruning a Branch

1. Remove branch weight by undercutting at A and remove limb by cutting through at B.
2. Remove stub at CD (line between branch bark ridge and outer edge of branch collar).
3. If D is difficult to find on hardwoods, drop vertical from C (line CX). Angle XCY=XCD.



Pruning a Leader off To Reduce Size

1. Remove top weight by cutting at A&E.
2. Remove stub at EF parallel to the branch bark ridge.

Medium pruning shall consist of the removal of dead, dying, diseased, interfering, objectionable and weak branches on the main trunk as well as those within the leaf area. An occasional branch up to one inch in diameter may remain within the main leaf area where it is not practical to remove it.

The following specifications shall apply:

a. All cuts shall be made sufficiently close to the trunk or parent limb, without cutting into the branch collar or leaving a protruding stub, so that closure can readily start under normal conditions. Clean cuts shall be made at all times.

b. It is necessary to precut branches too heavy to handle to prevent splitting or peeling the bark. Where necessary, to prevent tree or property damage, branches shall be lowered to the ground by proper ropes or equipment.

c. Treatment of cuts and wounds, with tree wound dressing, is optional except where open wounds in certain trees may attract insects that carry disease or allow fungus invasion. If such treatment is made, materials non-toxic to the cambium layer must be used, and care taken to treat only the exposed wood with a thin coat of dressing.

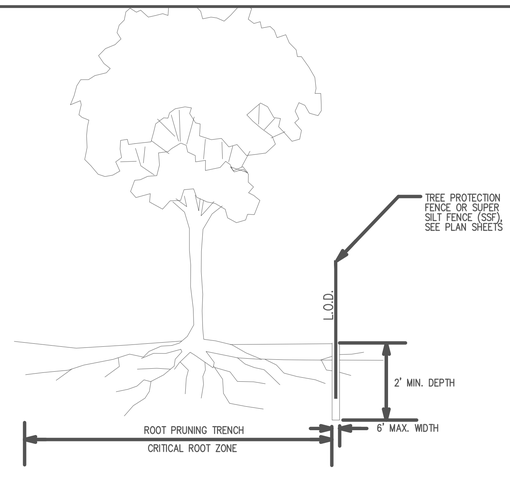
d. On trees known to be diseased, tools are to be disinfected with methyl alcohol at 70% (denatured wood alcohol diluted appropriately with water) or Chlorox solution after each cut and between trees where there is known to be a danger of transmitting the disease on tools.

e. Old injuries are to be inspected. Those not closing properly and where the callus growth is not already completely established should be traced where appropriate. If desired, for cosmetic purposes, the wound may be treated with a thin coat of wound dressing.

f. All girdling roots visible to the eye are to be reported to the supervisor and the Engineer.

g. The presence of any structural weakness, disease conditions, decayed trunk or branches, split crotches or branches, should be reported in writing to the supervisor and the Engineer, and corrective measures recommended.

CROWN PRUNING



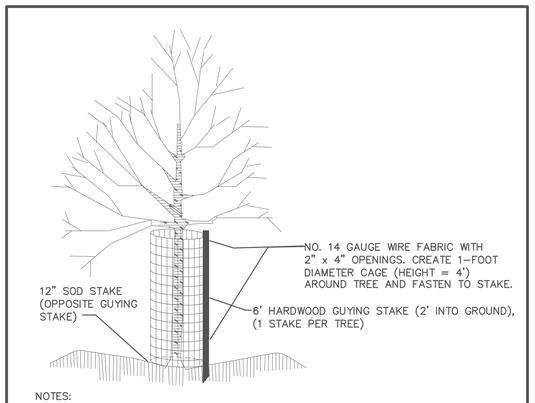
NOTES

1. RETENTION AREAS WILL BE SET AS PART OF THE REVIEW PROCESS.
2. BOUNDARIES OF RETENTION AREAS SHALL BE STAKED AND FLAGGED PRIOR TO TRENCHING.
3. EXACT LOCTION OF TRENCH SHALL BE INDENTIFIED.
4. TRENCH SHALL BE IMMEDIATELY BACKFILLED WITH SOIL REMOVED OR OTHER HIGH ORGANIC SOIL.
5. ROOTS SHALL BE CLEANLY CUT USING VIBRATORY KNIFE OR OTHER ACCEPTABLE EQUIPMENT
6. ALL SIGNIFICANT TREES SHALL BE INSPECTED BY A ISA CERTIFIED ARBORIST PRIOR TO CONSTRUCTION AND ROOT PRUNING.

SOURCE: CITY OF GAITHERSBURG, MARYLAND: CITY TREE MANUAL

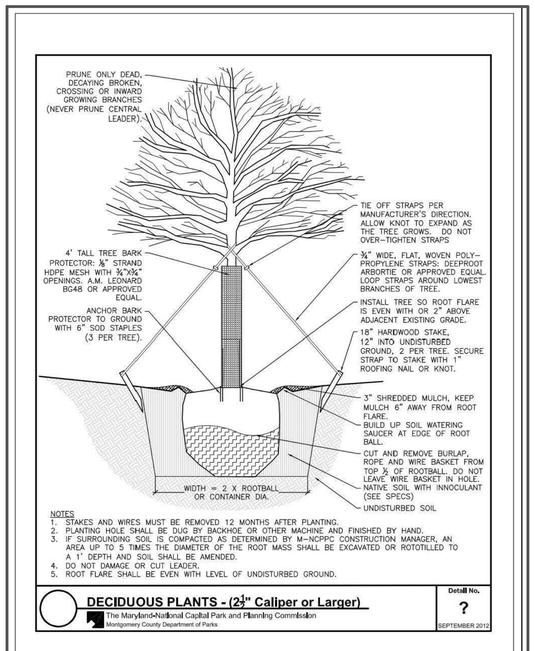
ROOT PRUNING PRIOR TO CONSTRUCTION

(IF NEEDED)



NOTES:
1. CAGE SHALL BE NO. 14 GAUGE WIRE FABRIC WITH 2"x 4" OPENINGS.
2. CAGE HEIGHT SHALL BE 4' (MIN.)
3. CREATE A 1-FOOT DIAMETER CAGE AROUND TREE.
4. FOR MULTI-STEM TREES AND SHRUBS OR TREES WITH LEADERS BELOW 4', USE WIDER CAGE TO LEAVE A 1-FOOT DIAMETER AROUND TREE.
5. CAGE SHALL BE FASTENED TO STAKE WITH TWO (MIN.) 11-INCH TWIST TIES, ONE AT TOP AND ONE AT 6"(MIN.) ABOVE THE GROUND.
6. INSTALL 6' HARDWOOD GUYING STAKE, 2' INTO GROUND, 1 STAKE (MIN.) PER CAGE.
7. ENSURE CAGE IS FASTENED TO THE GROUND TO PREVENT UPLIFT BY DEER BY INSTALLING A 12"SOD STAKE OPPOSITE THE GUYING STAKE.
8. FOR TREES LARGER THAN 3"CALIPER WITH NO BRANCHING BELOW 4', CAGE CAN BE SUBSTITUTED WITH DEER BARK PROTECTORS (ITEMS #pg48, BY A.M. LEONARD) OR EQUAL.
9. DO NOT DAMAGE TREE DURING INSTALLATION.
10. CAGES TO BE REMOVED ONLY AT DIRECTION OF FOREST ECOLOGIST.

TREE DEER PROTECTION



NOTES
1. STAKES AND WIRES MUST BE REMOVED 12 MONTHS AFTER PLANTING.
2. PLANTING HOLE SHALL BE DUG BY BACKHOE OR OTHER MACHINE AND FINISHED BY HAND.
3. IF SURROUNDING SOIL IS COMPACTED AS DETERMINED BY M-NCPPC CONSTRUCTION MANAGER, AN AREA UP TO 5 TIMES THE DIAMETER OF THE ROOT MASS SHALL BE EXCAVATED OR ROTOTILLED TO A 1' DEPTH AND SOIL SHALL BE AMENDED.
4. DO NOT DAMAGE OR CUT LEADER.
5. ROOT FLARE SHALL BE EVEN WITH LEVEL OF UNDISTURBED GROUND.

DECIDUOUS PLANTS - (2½" Caliper or Larger)

The Maryland-National Capital Park and Planning Commission
Montgomery County Department of Parks

Detail No. ?
SEPTEMBER 2012

DRAFT
NOT FOR CONSTRUCTION

JMT

NO.	REVISION	DATE	BY

MONTGOMERY COUNTY
DEPARTMENT OF TRANSPORTATION
GAITHERSBURG, MARYLAND

RECOMMENDED FOR APPROVAL

Chief, Design Section — Date

APPROVED

Chief, Division of Transportation Engineering — Date

Designed by: SJR Drawn by: SJR Checked by: JJR

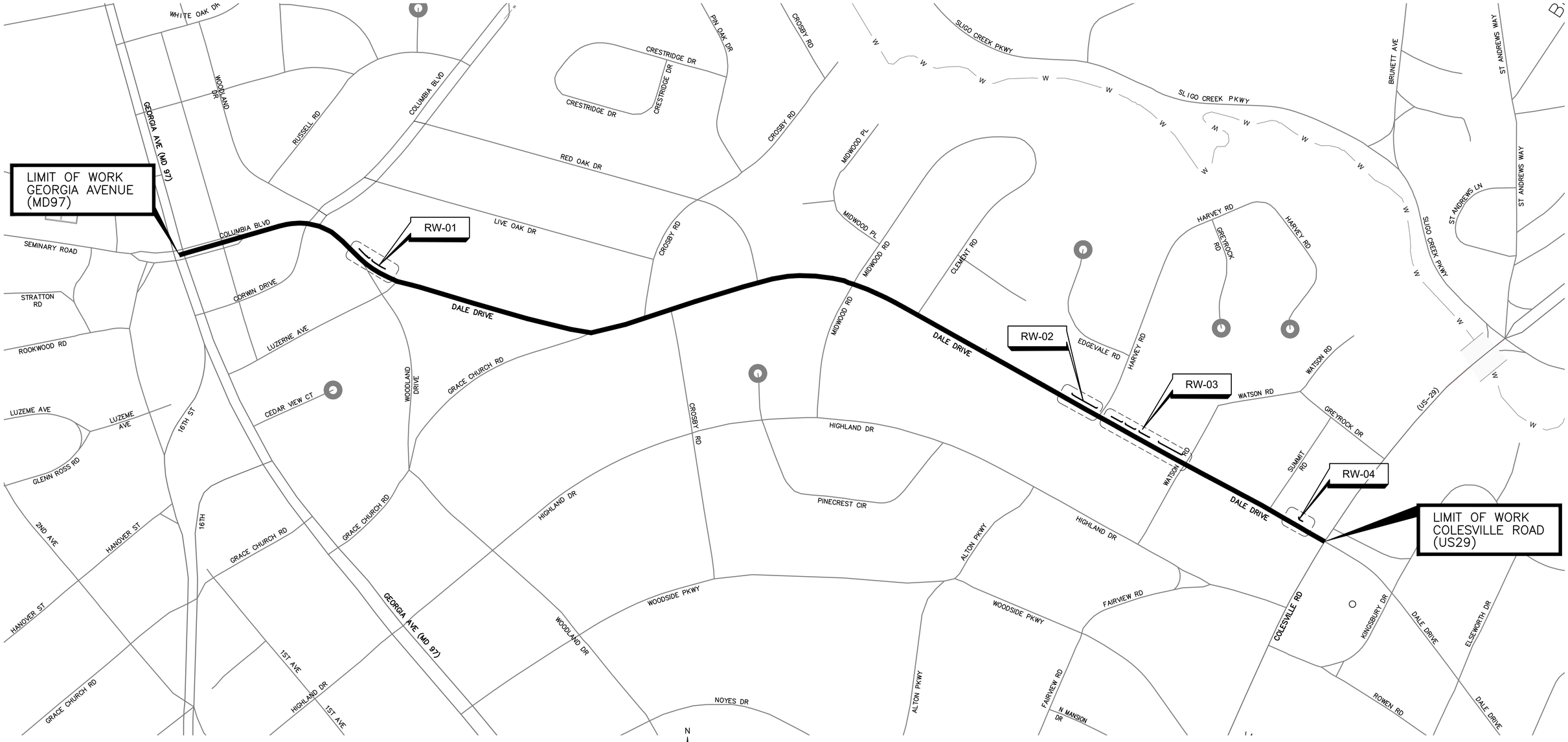
LS-10
LANDSCAPE DETAILS

DALE DRIVE
SHARED USE PATH

0 30' 60'

SCALE: 1"=30' DATE: NOVEMBER 2022

CIP No. : 502109 SHEET 89 of 181



STRUCTURES LOCATION PLAN		
STRUCTURE NO.	ID NO.	DESCRIPTION
RW-01	X-XXXXXXX	RETAINING WALL STA. 8+04.83 TO STA. 9+59.03
RW-02	X-XXXXXXX	RETAINING WALL STA. 41+17.96 TO STA. 42+43.33
RW-03	X-XXXXXXX	RETAINING WALL STA. 43+14.71 TO STA. 46+61.90
RW-04	X-XXXXXXX	RETAINING WALL STA. 52+33.77 TO STA. 52+56.86

DRAFT
NOT FOR CONSTRUCTION

JMT

NO.	REVISION	DATE	BY

MONTGOMERY COUNTY
DEPARTMENT OF TRANSPORTATION
GAITHERSBURG, MARYLAND

RECOMMENDED FOR APPROVAL

Chief, Design Section — Date

APPROVED

Chief, Division of Transportation Engineering — Date

Designed by: WY Drawn by: TNB Checked by: GGN

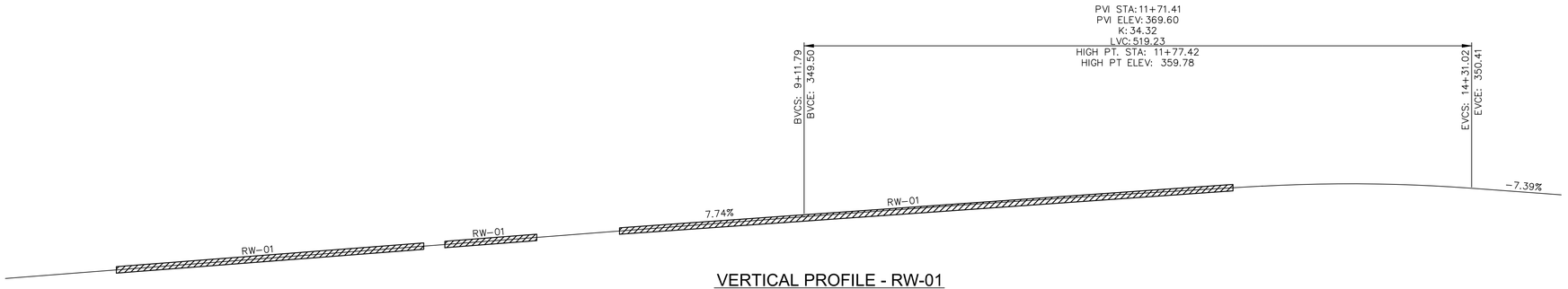
SLP-01
STRUCTURAL LOCATION PLAN
DALE DRIVE
SHARED USE PATH

0 200' 400'

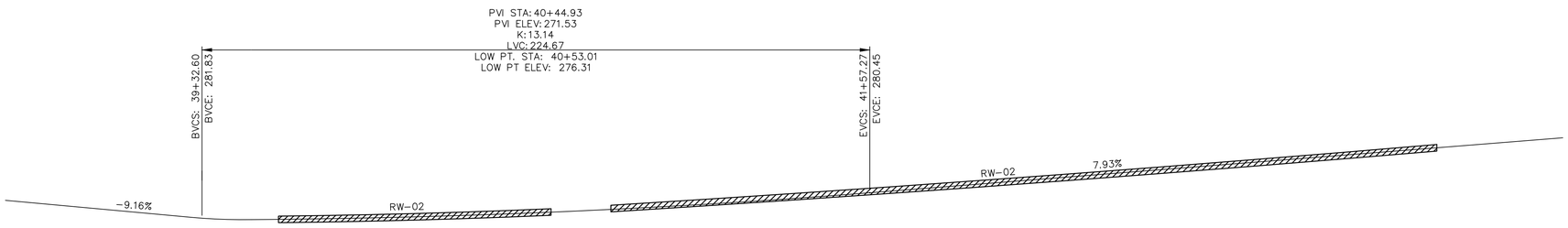
SCALE: 1"=200' DATE: NOVEMBER 2022

CIP No.: 502109 SHEET 90 of 181

FILE NAME: Q:\2018\1804565_001_dale_drive_pedestria\CADD\Structures\pSLP_01.dwg LAYOUT NAME: SLP-01 PLOTTED: Wednesday, November 23, 2022 - 7:30am USER: AHavener



VERTICAL PROFILE - RW-01



VERTICAL PROFILE - RW-02

GENERAL NOTES:

SPECIFICATIONS:

MDOT SHA STANDARD SPECIFICATIONS FOR CONSTRUCTION AND MATERIALS, DATED JULY 2022.

AASHTO LRFD BRIDGE DESIGN SPECIFICATIONS, 9TH EDITION, 2020.

CONCRETE DESIGN: f'c = 3.0 KSI.

REINFORCING STEEL DESIGN: fy = 60.0 KSI.

CONCRETE:

ALL STRUCTURE CONCRETE SHALL BE MIX. No. 3 (3500 PSI) EXCEPT AS NOTED BELOW UNDER REINFORCING STEEL.

REINFORCING STEEL:

REINFORCING STEEL SHALL CONFORM TO A615, GRADE 60. ALL SPLICES, NOT SHOWN, SHALL BE LAPPED AS PER BAR LAP CHARTS. MINIMUM COVER FOR ANY BAR SHALL BE 2" UNLESS OTHERWISE NOTED, WITH THE EXCEPTION OF BARS AT THE BOTTOM AND SIDES OF ALL FOOTINGS WHICH SHALL HAVE 3" MINIMUM COVER.

IF THE FRONT FACE OF A RETAINING WALL IS LESS THAN 10 FEET FROM THE EDGE OF PAVED SURFACES, EPOXY COATED REINFORCEMENT SHALL BE USED IN THE FRONT FACE OF THE STEM AND MIX. No. 6 (4500 PSI) CONCRETE SHALL BE USED FOR THE STEM.

ONLY GRADE 60 CAN BE USED.

RETAINING WALL SYSTEM:

DESIGN AND CONSTRUCTION OF SEGMENTAL CONCRETE RETAINING WALL SHALL BE IN ACCORDANCE WITH NATIONAL CONCRETE MASONRY ASSOCIATION (NCMA) DESIGN GUIDELINES FOR SEGMENTAL WALLS AND AASHTO LRFD BRIDGE DESIGN SPECIFICATIONS. THE COLOR AND/OR TEXTURE FINISH OF THE SEGMENTAL RETAINING WALL SHALL BE IN ACCORDANCE WITH THE SPECIAL PROVISIONS IN THE CONTRACT DOCUMENTS. WALL STYLE, TEXTURE AND COLOR MUST BE APPROVED BY MONTGOMERY COUNTY DOT PRIOR TO FABRICATION AND CONSTRUCTION OF WALL SYSTEM.

RETAINING WALL SYSTEM AND MANUFACTURERS MUST BE FROM THE LIST OF PRE APPROVED ALTERNATE RETAINING WALLS MAINTAINED BY THE MARYLAND STATE HIGHWAY ADMINISTRATION OFFICE OF BRIDGE DEVELOPMENT IN ACCORDANCE WITH SECTION 450 OF MDSHA SPECIFICATIONS. CONTRACTOR IS RESPONSIBLE FOR PREPARATION OF ALL DESIGN AND PLANS FOR WALL SYSTEM.

WALL SYSTEM SHALL BE DESIGNED FOR AN ALLOWABLE BEARING CAPACITY OF 3,000 LBS PER SQUARE FOOT.

DRAFT
NOT FOR CONSTRUCTION

JMT

NO.	REVISION	DATE	BY

MONTGOMERY COUNTY
DEPARTMENT OF TRANSPORTATION
GAITHERSBURG, MARYLAND

RECOMMENDED FOR APPROVAL

Chief, Design Section — Date

APPROVED

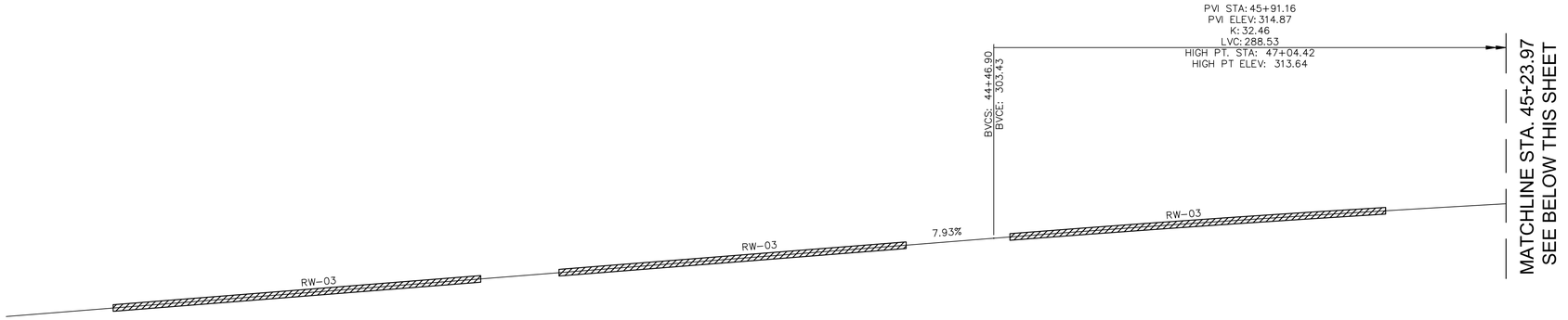
Chief, Division of Transportation Engineering — Date

Designed by: WY Drawn by: TNB Checked by: GGN

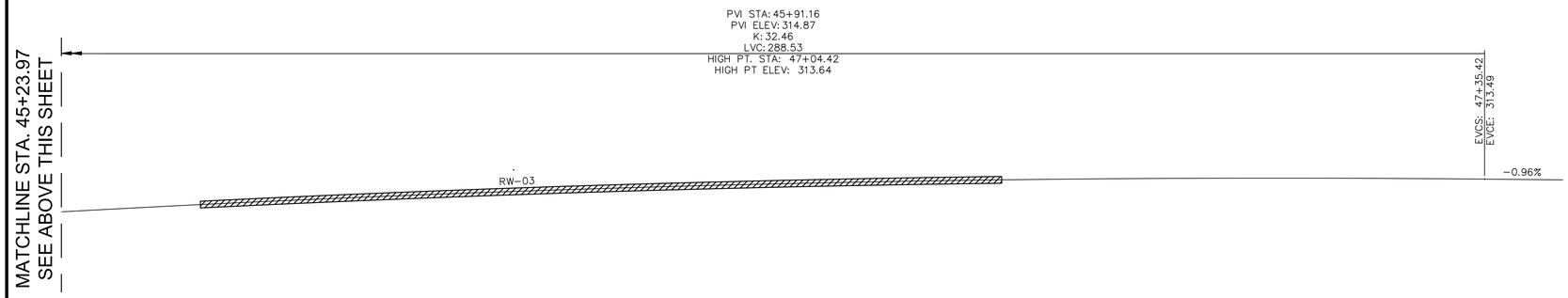
S−0.1
GENERAL STRUCTURE INFORMATION
DALE DRIVE
SHARED USE PATH

SCALE: NOT TO SCALE DATE: NOVEMBER 2022

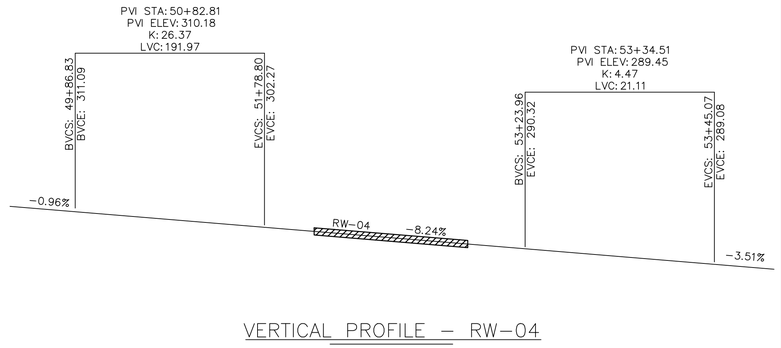
CIP No. : 502109 SHEET 91 of 181



VERTICAL PROFILE – RW-03



VERTICAL PROFILE – RW-03



VERTICAL PROFILE – RW-04

DRAFT
NOT FOR CONSTRUCTION

NO.	REVISION	DATE	BY

MONTGOMERY COUNTY
DEPARTMENT OF TRANSPORTATION
GAITHERSBURG, MARYLAND

RECOMMENDED FOR APPROVAL

Chief, Design Section — Date

APPROVED

Chief, Division of Transportation Engineering — Date

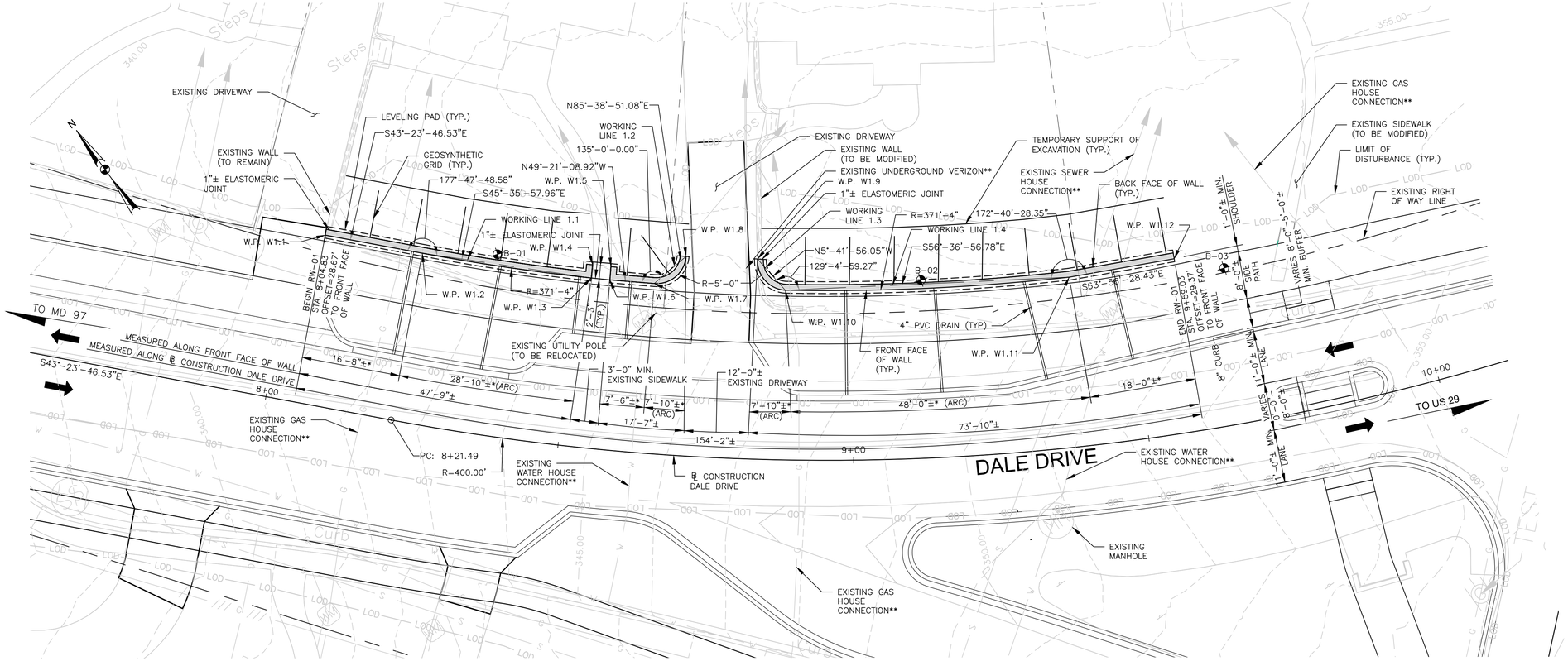
Designed by: WY Drawn by: TNB Checked by: GGN

S-0.2
GENERAL STRUCTURE INFORMATION
DALE DRIVE
SHARED USE PATH

SCALE: NOT TO SCALE DATE: NOVEMBER 2022

CIP No. : 502109 SHEET 92 of 181

FILE NAME: Q:\2018\1804565_001_dale_drive_pedestria\CADD\Structures\pST_00.dwg LAYOUT NAME: S-0.2 PLOTTED: Wednesday, November 23, 2022 – 7:31am USER: AHavener



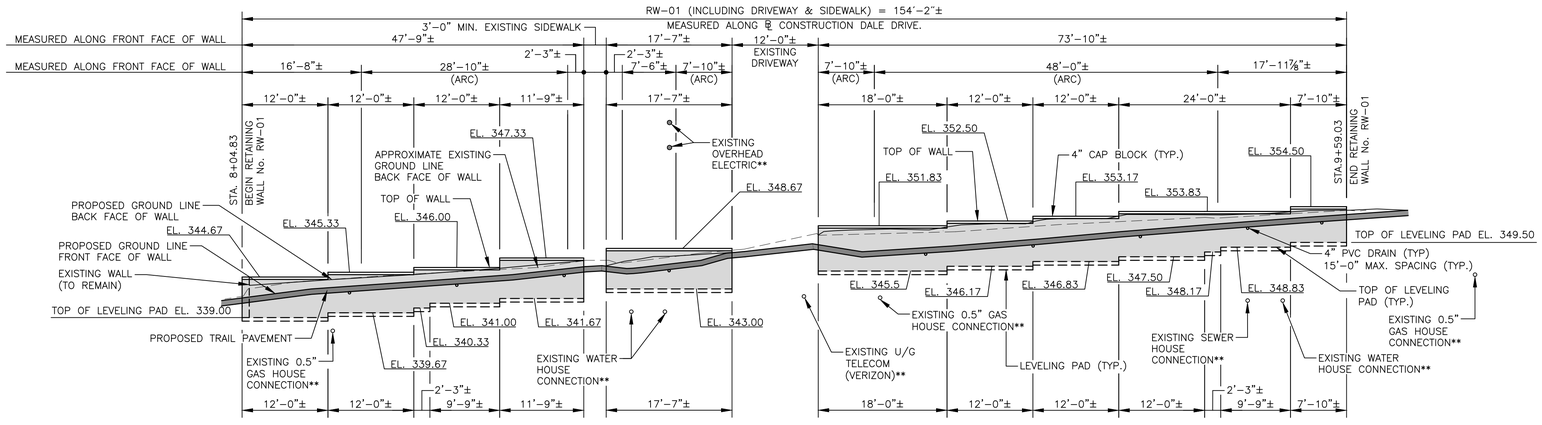
GENERAL PLAN - RW-01

SCALE: 1" = 10'-0"

COORDINATE TABLE				
WORKING POINT	NORTHING	EASTING	STATION	OFFSET
W.P W1.1	488,759.12	1,301,664.43	8+04.83	28.67(L)
W.P W1.2	488,747.01	1,301,675.88	8+21.49	28.67(L)
W.P W1.3	488,726.85	1,301,696.48	8+52.55	28.67(L)
W.P W1.4	488,728.53	1,301,697.98	8+52.53	30.92(L)
W.P W1.5	488,726.44	1,301,700.31	8+55.92	30.92(L)
W.P W1.6	488,724.74	1,301,698.84	8+55.96	28.67(L)
W.P W1.7	488,719.85	1,301,704.53	8+64.04	28.73(L)
W.P W1.8	488,720.39	1,301,711.58	8+69.52	33.68(L)
W.P W1.9	488,712.95	1,301,721.07	8+82.68	33.83(L)
W.P W1.10	488,705.92	1,301,721.77	9+87.93	28.67(L)
W.P W1.11	488,679.52	1,301,761.83	9+39.64	28.67(L)
W.P W1.12	488,671.61	1,301,778.00	9+59.03	29.37(L)

NOTE TO REVIEWER:

RIGHT OF WAY WILL NEED TO BE ACQUIRED IN ORDER FOR WALL TO BE CONSTRUCTED. LIMIT OF DISTURBANCE MAY NEED TO BE ADJUSTED.



DATUM EL. 320.00

* DIMENSION MEASURED ALONG FRONT FACE OF WALL

NOTES:

1. FOR THE LOCATION OF THE WALL, PLEASE SEE THE STRUCTURE LOCATION PLAN, DRAWING SLP-01.
2. ALL WORKING POINTS ARE LOCATED AT THE FRONT FACE OF WALL.
3. ELEVATIONS ARE SHOWN AT THE FRONT FACE OF WALL.
4. ALL ANGLES ARE 90°-00'-00" UNLESS OTHERWISE NOTED.
5. WEEPHOLES IN WALL ARE BELOW SIDEWALK, SEE MDOT SHA STANDARD DETAIL NO. RW-301 (DRAIN AT SIDEWALK DETAIL).
6. SAW CUT EXISTING WALLS AT W.P. W1.9 TO ALLOW FOR 1"± ELASTOMERIC JOINT.
7. SIDEWALK TO BE SAW CUT AT FRONT FACE OF WALL BETWEEN W.P. W1.3 AND W.P. W1.4.

DEVELOPED ELEVATION - RW-01

SCALE: 1" = 10'-0"

** CONTRACTOR TO VERIFY LOCATIONS AND ELEVATIONS OF ALL UTILITES PRIOR TO COMMENCEMENT OF CONSTRUCTION

HORIZONTAL DATUM	NAD 83(2011)
VERTICAL DATUM	NAVD 88

DRAFT
NOT FOR CONSTRUCTION

NO.	REVISION	DATE	BY

MONTGOMERY COUNTY
DEPARTMENT OF TRANSPORTATION
GAITHERSBURG, MARYLAND

RECOMMENDED FOR APPROVAL

Chief, Design Section — Date

APPROVED

Chief, Division of Transportation Engineering — Date

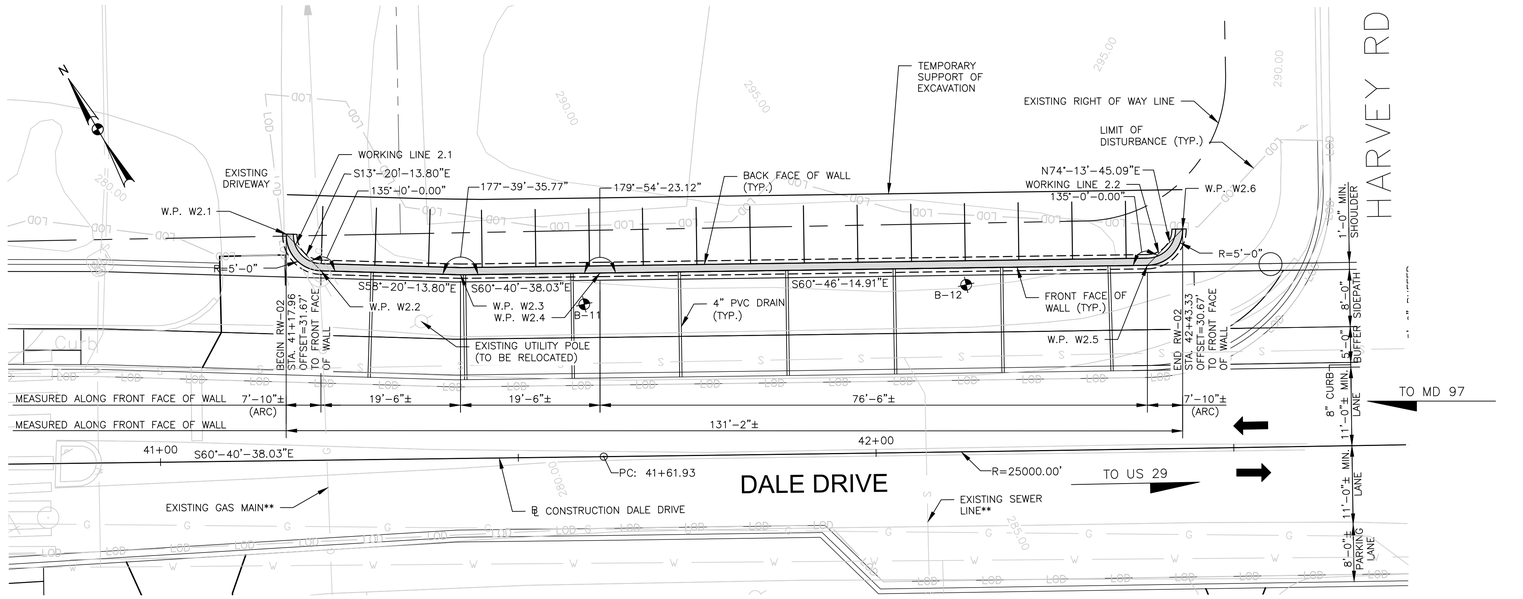
Designed by: WY Drawn by: TNB Checked by: GGN

S-01
GENERAL PLAN AND ELEVATION
DALE DRIVE
SHARED USE PATH

0 10' 20'

SCALE: 1"=10' DATE: NOVEMBER 2022

CIP No. : 502109 SHEET 93 of 181



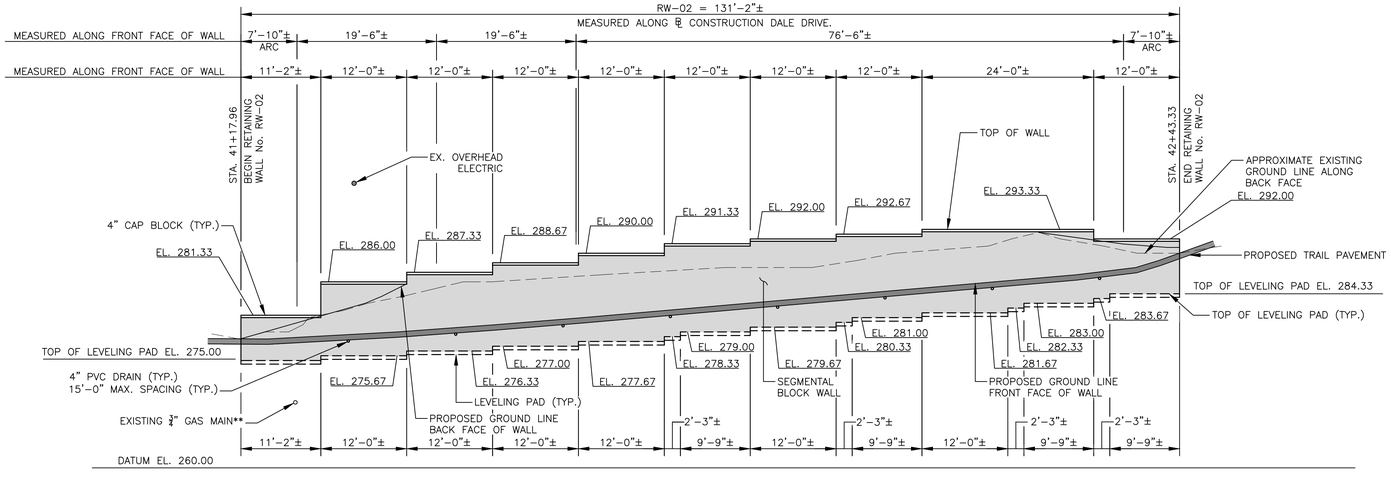
GENERAL PLAN - RW-02

SCALE: 1" = 10'-0"

NOTE TO REVIEWER:

RIGHT OF WAY WILL NEED TO BE ACQUIRED IN ORDER FOR WALL TO BE CONSTRUCTED. LIMIT OF DISTURBANCE MAY NEED TO BE ADJUSTED.

COORDINATE TABLE				
WORKING POINT	NORTHING	EASTING	STATION	OFFSET
W.P W2.1	488,136.26	1,304,741.94	41+17.96	31.67(L)
W.P W2.2	488,129.38	1,304,743.57	41+22.76	26.47(L)
W.P W2.3	488,119.15	1,304,760.16	41+42.24	25.67(L)
W.P W2.4	488,109.60	1,304,777.17	41+61.74	25.67(L)
W.P W2.5	488,072.24	1,304,843.93	42+38.32	25.67(L)
W.P W2.6	488,074.16	1,304,850.73	42+43.33	30.67(L)



DEVELOPED ELEVATION - RW-02

SCALE: 1" = 10'-0"

* DIMENSION MEASURED ALONG FRONT FACE OF WALL

** CONTRACTOR TO VERIFY LOCATIONS AND ELEVATIONS OF ALL UTILITES PRIOR TO COMMENCEMENT OF CONSTRUCTION

NOTES:

1. FOR THE LOCATION OF THE WALL, PLEASE SEE THE STRUCTURE LOCATION PLAN, DRAWING SLP-01.
2. ALL WORKING POINTS ARE LOCATED AT THE FRONT FACE OF WALL.
3. ELEVATIONS ARE SHOWN AT THE FRONT FACE OF WALL.
4. ALL ANGLES ARE 90°-00'-00" UNLESS OTHERWISE NOTED.
5. WEEPHOLES IN WALL ARE BELOW SIDEWALK, SEE MDOT SHA STANDARD DETAIL NO. RW-301 (DRAIN AT SIDEWALK DETAIL).

HORIZONTAL DATUM	NAD 83(2011)
VERTICAL DATUM	NAVD 88

DRAFT
NOT FOR CONSTRUCTION

JMT

NO.	REVISION	DATE	BY

MONTGOMERY COUNTY
DEPARTMENT OF TRANSPORTATION
GAITHERSBURG, MARYLAND

RECOMMENDED FOR APPROVAL

Chief, Design Section — Date

APPROVED

Chief, Division of Transportation Engineering — Date

Designed by: WY Drawn by: TNB Checked by: GGN

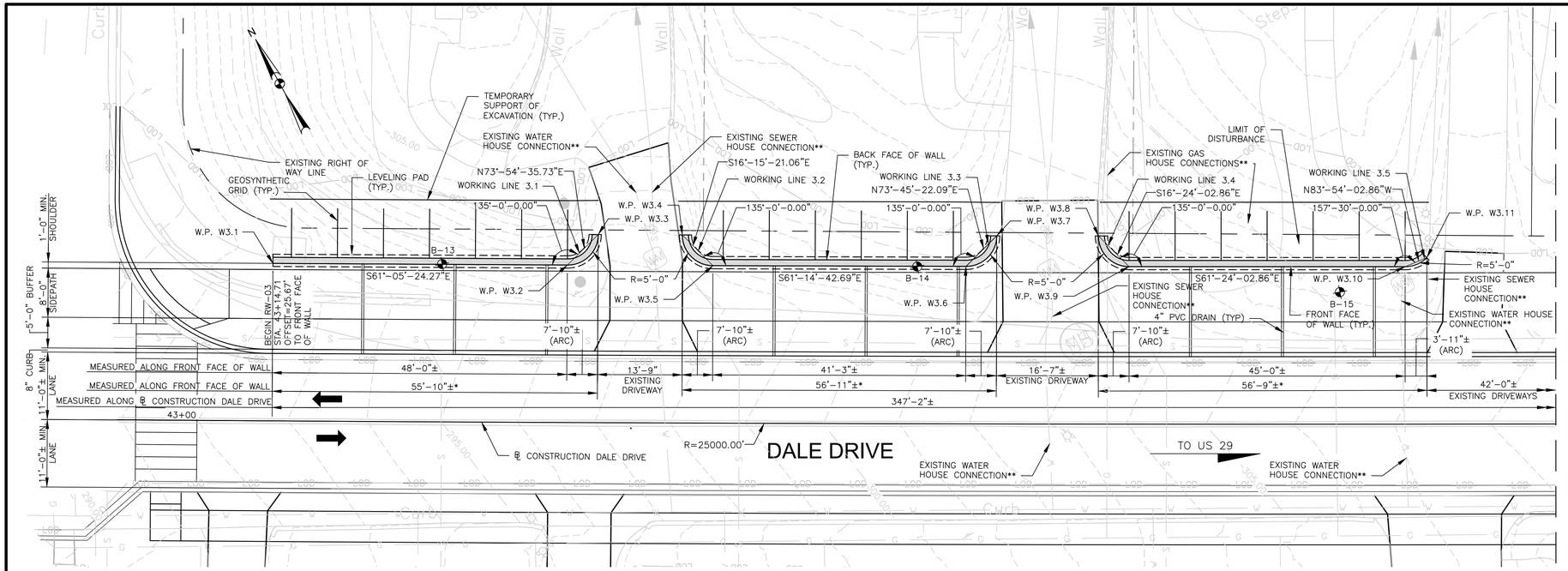
S-02
GENERAL PLAN AND ELEVATION
DALE DRIVE
SHARED USE PATH

0 10' 20'

SCALE: 1"=10' DATE: NOVEMBER 2022

CIP No. : 502109 SHEET 94 of 181

FILE NAME: Q:\2018\1804565_001_dale_drive_pedestria\CADD\Structures\pST_01.dwg LAYOUT NAME: S-02 PLOTTED: Wednesday, November 23, 2022 - 7:35am USER: AHavener



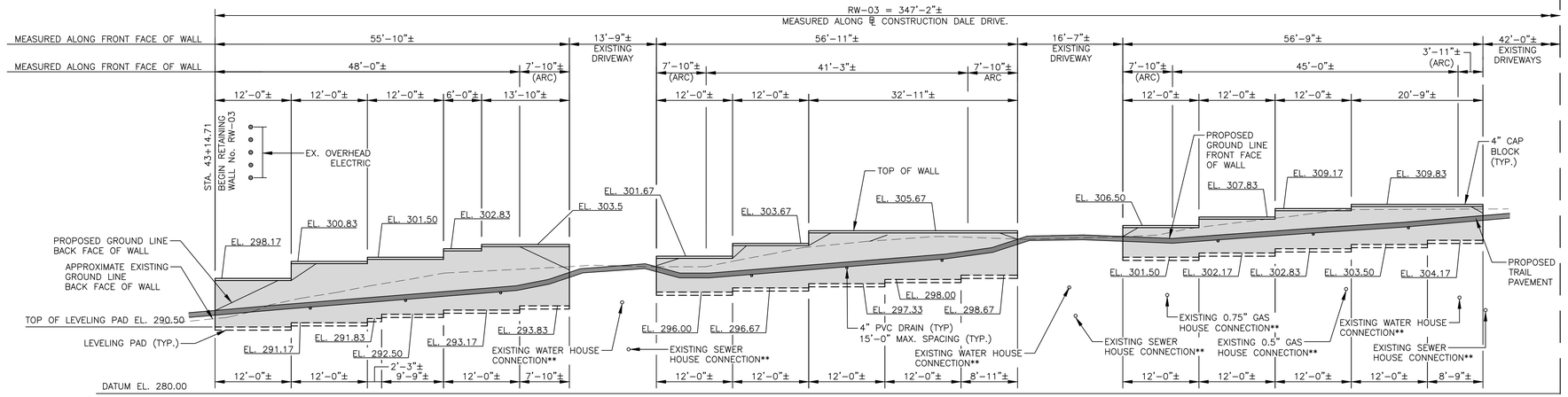
GENERAL PLAN - RW-03.1

SCALE: 1" = 10'-0"

NOTE TO REVIEWER:

RIGHT OF WAY WILL NEED TO BE ACQUIRED IN ORDER FOR WALL TO BE CONSTRUCTED. LIMIT OF DISTURBANCE MAY NEED TO BE ADJUSTED.

COORDINATE TABLE				
WORKING POINT	NORTHING	EASTING	STATION	OFFSET
W.P W3.1	488,035.17	1,304,910.63	43+14.71	25.67(L)
W.P W3.2	488,011.96	1,304,952.65	43+62.76	25.67(L)
W.P W3.3	488,013.92	1,304,959.44	43+67.77	30.67(L)
W.P W3.4	488,007.30	1,304,971.45	43+81.50	30.67(L)
W.P W3.5	488,000.52	1,305,973.43	43+86.51	25.67(L)
W.P W3.6	487,980.67	1,305,009.59	44+27.80	25.67(L)
W.P W3.7	487,982.65	1,305,016.38	44+31.81	30.67(L)
W.P W3.8	487,974.69	1,305,030.92	44+49.40	30.67(L)
W.P W3.9	487,967.91	1,305,032.91	44+54.41	25.67(L)
W.P W3.10	487,946.37	1,305,072.42	44+99.46	25.67(L)
W.P W3.11	487,945.96	1,305,076.23	45+03.00	27.14(L)



DEVELOPED ELEVATION - RW-03.1

SCALE: 1" = 10'-0"

MATCHLINE STA. 45+23.97- SEE SHEET NO. S-05.2

NOTES:

1. FOR THE LOCATION OF THE WALL, PLEASE SEE THE STRUCTURE LOCATION PLAN, DRAWING SLP-01.
2. ALL WORKING POINTS ARE LOCATED AT THE FRONT FACE OF WALL.
3. ELEVATIONS ARE SHOWN AT THE FRONT FACE OF WALL.
4. ALL ANGLES ARE 90°-00'-00" UNLESS OTHERWISE NOTED.
5. WEEPHOLES IN WALL ARE BELOW SIDEWALK, SEE MDOT SHA STANDARD DETAIL NO. RW-301 (DRAIN AT SIDEWALK DETAIL).

* DIMENSION MEASURED ALONG FRONT FACE OF WALL

** CONTRACTOR TO VERIFY LOCATIONS AND ELEVATIONS OF ALL UTILITES PRIOR TO COMMENCEMENT OF CONSTRUCTION

HORIZONTAL DATUM	NAD 83(2011)
VERTICAL DATUM	NAVD 88

DRAFT
NOT FOR CONSTRUCTION

NO.	REVISION	DATE	BY

MONTGOMERY COUNTY
DEPARTMENT OF TRANSPORTATION
GAITHERSBURG, MARYLAND

RECOMMENDED FOR APPROVAL

Chief, Design Section — Date

APPROVED

Chief, Division of Transportation Engineering — Date

Designed by: WY Drawn by: TNB Checked by: GGN

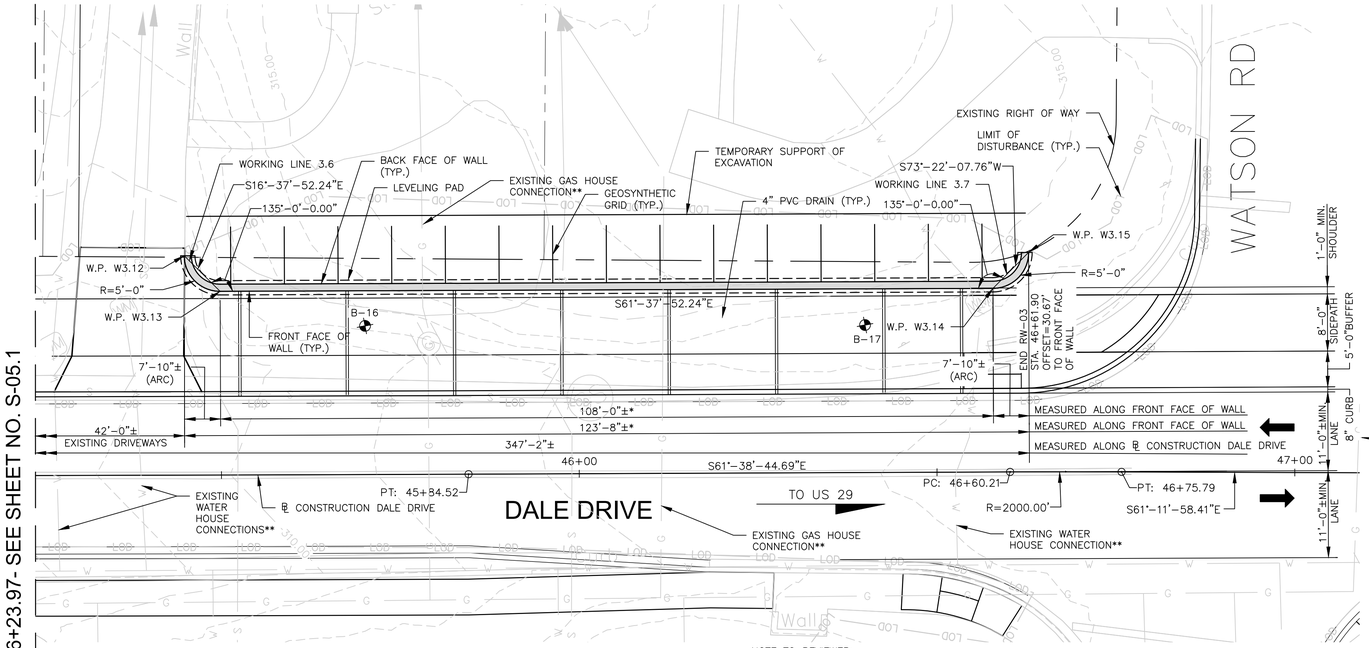
S-03.1
GENERAL PLAN AND ELEVATION

DALE DRIVE
SHARED USE PATH

0 10' 20'

SCALE: 1"=10' DATE: NOVEMBER 2022

CIP No. : 502109 SHEET 95 of 181



GENERAL PLAN - RW-03.2

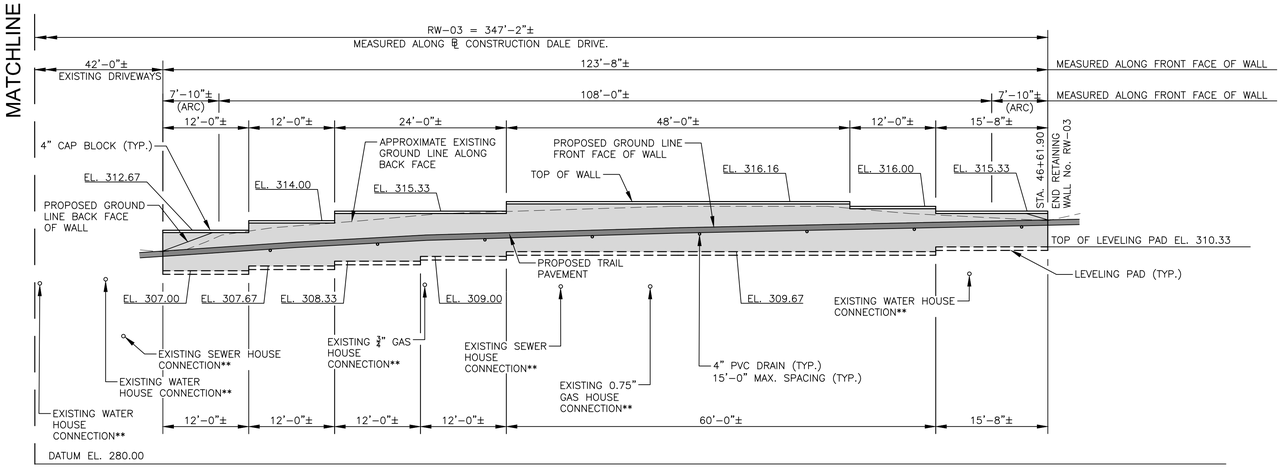
SCALE: 1" = 10'-0"

COORDINATE TABLE				
WORKING POINT	NORTHING	EASTING	STATION	OFFSET
W.P W3.12	487,929.12	1,305,114.67	45+44.87	30.67(L)
W.P W3.13	487,922.34	1,305,116.69	45+49.89	25.67(L)
W.P W3.14	487,871.02	1,305,211.72	46+57.92	25.67(L)
W.P W3.15	487,873.05	1,305,218.50	46+61.90	30.67(L)

NOTE TO REVIEWER:

RIGHT OF WAY WILL NEED TO BE ACQUIRED IN ORDER FOR WALL TO BE CONSTRUCTED. LIMIT OF DISTURBANCE MAY NEED TO BE ADJUSTED.

MATCHLINE STA. 456+23.97- SEE SHEET NO. S-05.1



DEVELOPED ELEVATION - RW-03.2

SCALE: 1" = 10'-0"

* DIMENSION MEASURED ALONG FRONT FACE OF WALL

** CONTRACTOR TO VERIFY LOCATIONS AND ELEVATIONS OF ALL UTILITES PRIOR TO COMMENCEMENT OF CONSTRUCTION

NOTES:

1. FOR THE LOCATION OF THE WALL, PLEASE SEE THE STRUCTURE LOCATION PLAN, DRAWING SLP-01.
2. ALL WORKING POINTS ARE LOCATED AT THE FRONT FACE OF WALL.
3. ELEVATIONS ARE SHOWN AT THE FRONT FACE OF WALL.
4. ALL ANGLES ARE 90°-00'-00" UNLESS OTHERWISE NOTED.
5. WEEPHOLES IN WALL ARE BELOW SIDEWALK, SEE MDOT SHA STANDARD DETAIL NO. RW-301 (DRAIN AT SIDEWALK DETAIL).

HORIZONTAL DATUM	NAD 83(2011)
VERTICAL DATUM	NAVD 88

DRAFT
NOT FOR CONSTRUCTION

NO.	REVISION	DATE	BY

MONTGOMERY COUNTY
DEPARTMENT OF TRANSPORTATION
GAITHERSBURG, MARYLAND

RECOMMENDED FOR APPROVAL

Chief, Design Section — Date

APPROVED

Chief, Division of Transportation Engineering — Date

Designed by: WY Drawn by: TNB Checked by: GGN

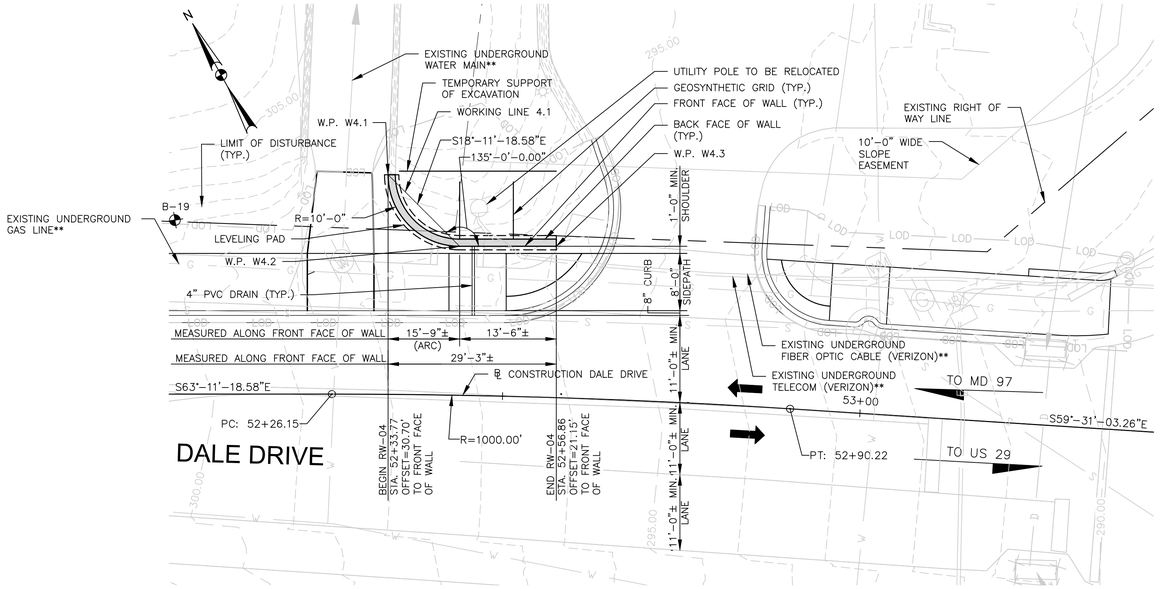
S-03.2
GENERAL PLAN AND ELEVATION

DALE DRIVE
SHARED USE PATH

0 10' 20'
SCALE: 1"=10'

DATE: NOVEMBER 2022

CIP No. : 502109 SHEET 96 of 181



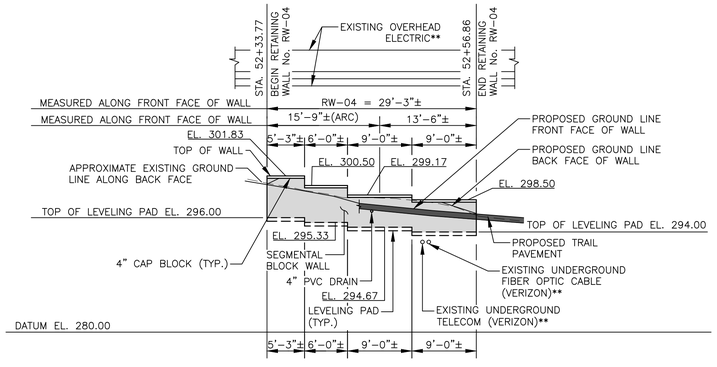
GENERAL PLAN - RW-04

SCALE: 1" = 10'-0"

COORDINATE TABLE				
WORKING POINT	NORTHING	EASTING	STATION	OFFSET
W.P W4.1	487,602.13	1,305,720.24	52+33.77	30.70(L)
W.P W4.2	487,588.70	1,305,724.65	52+43.64	20.83(L)
W.P W4.3	487,582.61	1,305,736.70	52+56.86	21.15(L)

NOTE TO REVIEWER:

RIGHT OF WAY WILL NEED TO BE ACQUIRED IN ORDER FOR WALL TO BE CONSTRUCTED. LIMIT OF DISTURBANCE MAY NEED TO BE ADJUSTED.



DEVELOPED ELEVATION - RW-04

SCALE: 1" = 10'-0"

* DIMENSION MEASURED ALONG FRONT FACE OF WALL

** CONTRACTOR TO VERIFY LOCATIONS AND ELEVATIONS OF ALL UTILITES PRIOR TO COMMENCEMENT OF CONSTRUCTION

NOTES:

1. FOR THE LOCATION OF THE WALL, PLEASE SEE THE STRUCTURE LOCATION PLAN, DRAWING SLP-01.
2. ALL WORKING POINTS ARE LOCATED AT THE FRONT FACE OF WALL.
3. ELEVATIONS ARE SHOWN AT THE FRONT FACE OF WALL.
4. ALL ANGLES ARE 90°-00'-00" UNLESS OTHERWISE NOTED.
5. WEEPHOLES IN WALL ARE BELOW SIDEWALK, SEE MDOT SHA STANDARD DETAIL NO. RW-301 (DRAIN AT SIDEWALK DETAIL).

HORIZONTAL DATUM	NAD 83(2011)
VERTICAL DATUM	NAVD 88

DRAFT
NOT FOR CONSTRUCTION

NO.	REVISION	DATE	BY

MONTGOMERY COUNTY
DEPARTMENT OF TRANSPORTATION
GAITHERSBURG, MARYLAND

RECOMMENDED FOR APPROVAL

Chief, Design Section — Date

APPROVED

Chief, Division of Transportation Engineering — Date

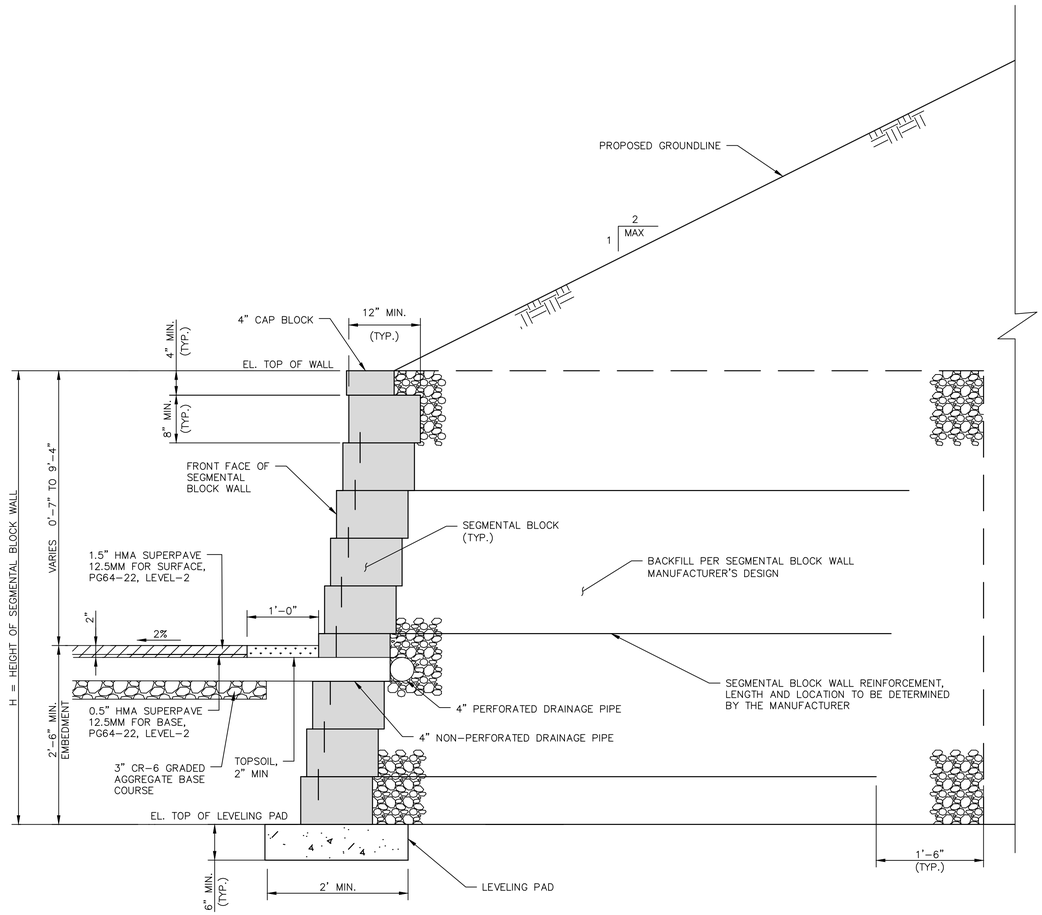
Designed by: WY Drawn by: TNB Checked by: GGN

S-04
GENERAL PLAN AND ELEVATION
DALE DRIVE
SHARED USE PATH

0 10' 20'

SCALE: 1"=10' DATE: NOVEMBER 2022

CIP No. : 502109 SHEET 97 of 181



SEGMENTAL BLOCK WALL TYPICAL SECTION

SCALE: 1" = 1'-0"

NOTES:

1. THE DESIGN CALCULATIONS SHALL INCLUDE, BUT ARE NOT LIMITED TO CALCULATIONS FOR INTERNAL STABILITY, BEARING PRESSURE, AND ALL OTHER APPLICABLE FAILURE MODES INDICATED IN THE CONTRACT DOCUMENTS AND AASHTO LRFD BRIDGE DESIGN SPECIFICATIONS, 9TH EDITION 2020.
2. MINIMUM DESIGN FACTORS OF SAFETY SHALL BE IN ACCORDANCE WITH THE CONTRACT DOCUMENTS AND AASHTO LRFD BRIDGE DESIGN SPECIFICATIONS.
3. DESIGN PARAMATERS:

MATERIALS	TOTAL UNIT WEIGHT (PCF)	COHESION (PSF)	ANGLE OF INTERNAL FRICTION (DEGREES)
REINFORCED FILL (NO. 57 STONE)	110	0	34
EMBANKMENT BACKFILL	120	0	30
FOUNDATION SUBGRADE	120	0	30

SEISMIC CLASSIFICATION:
SOIL SITE CLASS-CLASS C
PEAK SEISMIC GROUND ACCELERATION COFFICIENT (As)-0.046 g

4. THE EXTERNAL STABILITY OF SEGMENTAL BLOCK WALL HAVE BEEN EVALUATED TO MEET EXTERNAL STABILITY FOR STRENGTH, SERVICE AND EXTREME EVENT I LIMIT STATES. MINIMUM LENGTH OF SEGMENTAL BLOCK REINFORCEMENT SHALL BE 0.7H OR 6'-0" MINIMUM, WHICHEVER IS GREATER.
5. FACTORED BEARING RESISTANCE OF THE SEGMENTAL BLOCK SUBBASE AND FINAL BEARING VALUES SHALL BE 3,600 PSF FOR STRENGTH AND SEISMIC LIMIT STATES.

DRAFT
NOT FOR CONSTRUCTION

JMT

NO.	REVISION	DATE	BY

MONTGOMERY COUNTY
DEPARTMENT OF TRANSPORTATION
GAITHERSBURG, MARYLAND

RECOMMENDED FOR APPROVAL

Chief, Design Section — Date

APPROVED

Chief, Division of Transportation Engineering — Date

Designed by: WY Drawn by: CW Checked by: GGN

S-05
CONCRETE FINISH & COPING DETAILS
DALE DRIVE
SHARED USE PATH

SCALE: NOT TO SCALE DATE: NOVEMBER 2022

CIP No. : 502109 SHEET 98 of 181

BORING NUMBER B-1

PAGE 1 OF 1

KIM ENGINEERING, INC.
Consulting Geotechinical Engineers
Baltimore, Maryland

CLIENT Johnson, Mirmiran & Thompson
PROJECT NAME Dale Drive Pedestrian Facility
PROJECT NUMBER G21003
PROJECT LOCATION Silver Spring, MD
DATE STARTED 8/9/21 **COMPLETED** 8/9/21
GROUND ELEVATION 346.019 ft **HOLE SIZE** 6"
DRILLING CONTRACTOR Kim Engineering Inc.
GROUND WATER LEVELS:
DRILLING METHOD H.S.A
AT TIME OF DRILLING ---
LOGGED BY SE **CHECKED BY** TL
AT END OF DRILLING ---
NOTES N 488739.393 E 1301686.046
AFTER DRILLING ---

EL. 341.00
TOP OF LEVELING
PAD RW-01

DEPTH (ft)	ELEVATION	MATERIAL DESCRIPTION	SAMPLE TYPE NUMBER	RECOVERY % (ROD)	BLOW COUNTS (N VALUE)
	345.69	4" Asphalt			
		Brown, reddish brown, light brown, moist, loose to dense, silty SAND (SM) with mica and gravel.	SS 1	44	3-4-5 (9)
			SS 2	67	5-6-6 (12)
5			SS 3	100	8-9-11 (20)
			SS 4	67	5-8-23 (31)
10	336.02	DECOMPOSED ROCK			
		Brown, light brown, moist, very dense, silty SAND (SM) with mica and decomposed rock fragments.	SS 5	75	12-29-50/4"
			SS 6	100	50
15					
		Caved in @ 20'	SS 7	59	25-38-50/5"
20					
			SS 8	100	50/3"
25					
	317.27	Bottom of hole at 28.8 feet.	SS 9	100	50/3"

POCKET PEN. (tsf) | DRY UNIT WT. (pcf) | ▲ SPT N VALUE ▲ (PL MC LL) | ☐ FINES CONTENT (%) ☐ (20 40 60 80)

GEOTECH BH PLOTS DALE DRIVE PEDESTRIAN FACILITY GPJ GINT US GDT 10/20/21

BORING NUMBER B-2

PAGE 1 OF 1

KIM ENGINEERING, INC.
Consulting Geotechinical Engineers
Baltimore, Maryland

CLIENT Johnson, Mirmiran & Thompson
PROJECT NAME Dale Drive Pedestrian Facility
PROJECT NUMBER G21003
PROJECT LOCATION Silver Spring, MD
DATE STARTED 8/9/21 **COMPLETED** 8/9/21
GROUND ELEVATION 351.780 ft **HOLE SIZE** 6"
DRILLING CONTRACTOR Kim Engineering Inc.
GROUND WATER LEVELS:
DRILLING METHOD H.S.A
AT TIME OF DRILLING ---
LOGGED BY SE **CHECKED BY** TL
AT END OF DRILLING ---
NOTES N 488693.861 E 1301741.286
AFTER DRILLING ---

EL. 346.17
TOP OF LEVELING
PAD RW-01

DEPTH (ft)	ELEVATION	MATERIAL DESCRIPTION	SAMPLE TYPE NUMBER	RECOVERY % (ROD)	BLOW COUNTS (N VALUE)
	351.28	6" Topsoil			
		Brown, light brown, dark brown, moist, loose to medium dense, silty SAND (SM) with mica and gravel.	SS 1	33	2-3-3 (6)
			SS 2	67	4-5-7 (12)
5			SS 3	67	10-10-11 (21)
			SS 4	6	10-9-10 (19)
10			SS 5	67	10-11-14 (25)
			SS 6	67	9-9-12 (21)
15					
	333.28	DECOMPOSED ROCK			
20		Light brown, dark brown, moist, dense to very dense, silty SAND (SM) with mica and decomposed rock fragments.	SS 7	78	26-32-41 (73)
		Caved in @ 22'6"			
25			SS 8	89	20-22-24 (46)
30	321.78	Bottom of hole at 30.0 feet.	SS 9	89	27-35-43 (78)

POCKET PEN. (tsf) | DRY UNIT WT. (pcf) | ▲ SPT N VALUE ▲ (PL MC LL) | ☐ FINES CONTENT (%) ☐ (20 40 60 80)

GEOTECH BH PLOTS DALE DRIVE PEDESTRIAN FACILITY GPJ GINT US GDT 10/20/21

BORING NUMBER B-3

PAGE 1 OF 1

KIM ENGINEERING, INC.
Consulting Geotechinical Engineers
Baltimore, Maryland

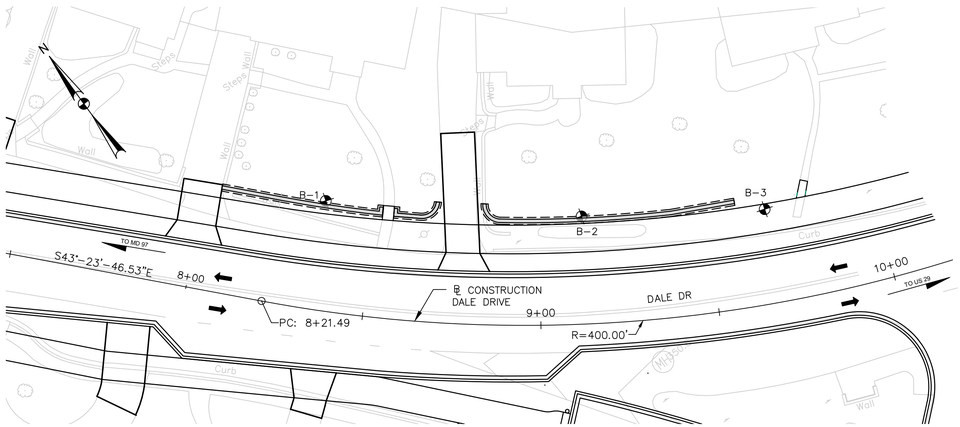
CLIENT Johnson, Mirmiran & Thompson
PROJECT NAME Dale Drive Pedestrian Facility
PROJECT NUMBER G21003
PROJECT LOCATION Silver Spring, MD
DATE STARTED 8/9/21 **COMPLETED** 8/9/21
GROUND ELEVATION 353.633 ft **HOLE SIZE** 6"
DRILLING CONTRACTOR Kim Engineering Inc.
GROUND WATER LEVELS:
DRILLING METHOD H.S.A
AT TIME OF DRILLING ---
LOGGED BY SE **CHECKED BY** TL
AT END OF DRILLING ---
NOTES N 488665.389 E 1301783.890
AFTER DRILLING ---

EL. 349.50 TOP
OF LEVELING
PAD RW-01

DEPTH (ft)	ELEVATION	MATERIAL DESCRIPTION	SAMPLE TYPE NUMBER	RECOVERY % (ROD)	BLOW COUNTS (N VALUE)
	353.13	6" Topsoil			
		Brown, light brown, dark brown, gray, moist, loose to dense, silty SAND (SM) with mica and gravel.	SS 1	67	4-5-7 (12)
			SS 2	89	4-4-3 (7)
5			SS 3	78	4-4-4 (8)
			SS 4	89	4-6-6 (12)
10			SS 5	89	4-5-6 (11)
			SS 6	89	4-5-8 (13)
15					
			SS 7	89	8-12-12 (24)
20					
			SS 8	100	10-15-20 (35)
25					
30	323.63	Bottom of hole at 30.0 feet.	SS 9	100	15-22-25 (47)

POCKET PEN. (tsf) | DRY UNIT WT. (pcf) | ▲ SPT N VALUE ▲ (PL MC LL) | ☐ FINES CONTENT (%) ☐ (20 40 60 80)

GEOTECH BH PLOTS DALE DRIVE PEDESTRIAN FACILITY GPJ GINT US GDT 10/20/21



BORING LOCATION PLAN - RW-01
SCALE: 1" = 20'-0"

NOTE TO REVIEWER:

RIGHT OF WAY WILL NEED TO BE ACQUIRED IN ORDER FOR WALL TO BE CONSTRUCTED. LIMIT OF DISTURBANCE MAY NEED TO BE ADJUSTED.

NOTES:

1. TEST BORINGS WERE DRILLED IN AUGUST, 2021 BY KIM ENGINEERING, INC.
2. BLOWS = BLOWS ON SPLIT BARREL SAMPLER BY A 140 POUND WEIGHT AND DRIVE WEIGHT ASSEMBLY FREELY FALLING 30 INCHES.
3. CASING IS METHOD OF MAINTAINING AN OPEN BOREHOLE.
4. W.L. = WATER TABLE LEVEL. FIGURE IN PARENTHESIS INDICATES READING IN HOURS AFTER COMPLETION OF BORING. CAVE = BORING CAVED IN AT ELEVATION INDICATED AND WATER LEVEL COULD NOT BE DETERMINED.
5. TEST BORINGS WERE DRILLED IN ACCORDANCE WITH AASHTO T206 AND ASTM D 1586. ROCK CORING IN ACCORDANCE WITH AASHTO T225 AND ASTM D 2113.
6. SOILD HAS BEEN IDENTIFIED BY A GEOTECHNICAL INSPECTOR.
7. UNDISTURBED SOIL SAMPLES ATTEMPTED ARE DESIGNATED AS 'SHELBY'.
8. THE BORING LOG SOIL SYMBOLS REFLECT ONLY THE MAJOR SOIL CONSTITUENT; FOR MORE COMPLETE SOIL CHARACTERISTICS REFER TO THE WRITTEN DESCRIPTION AT THE RESPECTIVE ELEVATION.
9. THE FIELD BORING LOGS RECORD OBSERVATIONS OF THE DRILLING OPERATIONS. THE LOGS ARE AVAILABLE UPON REQUEST

DRAFT
NOT FOR CONSTRUCTION

JMT

NO.	REVISION	DATE	BY

MONTGOMERY COUNTY
DEPARTMENT OF TRANSPORTATION
GAITHERSBURG, MARYLAND

RECOMMENDED FOR APPROVAL

Chief, Design Section — Date

APPROVED

Chief, Division of Transportation Engineering — Date

Designed by: WY Drawn by: CW Checked by: GGN

S-06
BORING AND DRIVE TESTS

DALE DRIVE
SHARED USE PATH

0 20' 40'
SCALE: 1"=20'

DATE: NOVEMBER 2022

CIP No. : 502109 SHEET 99 of 181

FILE NAME: Q:\2018\1804565_001_dale_drive_pedestria\CADD\Structures\pST_Boring & Drive Tests.dwg LAYOUT NAME: S-06 PLOTTED: Wednesday, November 23, 2022 - 7:39am USER: AHavener

EL. 277.00
TOP OF LEVELING
PAD RW-02

KIM — KIM ENGINEERING, INC.
Consulting Geotechinical Engineers
Baltimore, Maryland

BORING NUMBER B-11
PAGE 1 OF 1

CLIENT Johnson, Mirmiran & Thompson
PROJECT NAME Dale Drive Pedestrian Facility
PROJECT NUMBER G21003
PROJECT LOCATION Silver Spring, MD
DATE STARTED 8/11/21 **COMPLETED** 8/11/21
GROUND ELEVATION 281.544 ft **HOLE SIZE** 6"
DRILLING CONTRACTOR Kim Engineering Inc.
GROUND WATER LEVELS:
DRILLING METHOD H.S.A
AT TIME OF DRILLING ---
LOGGED BY SE **CHECKED BY** TL
AT END OF DRILLING ---
NOTES N 488106.916 E 1304773.076
AFTER DRILLING ---

DEPTH (ft)	GRAPHIC LOG	ELEVATION	MATERIAL DESCRIPTION	SAMPLE TYPE NUMBER	RECOVERY % (RQD)	BLOW COUNTS (N VALUE)	POCKET PEN. (tsf)	DRY UNIT WT. (pcf)	▲ SPT N VALUE ▲ PL MC LL / ☐ FINES CONTENT (%) ☐ (20 40 60 80)
		281.29	3" Topsoil Brown, light brown, moist, loose to medium dense, silty SAND (SM) with mica and gravel.	SS 1	67	1-2-3 (5)			
				SS 2	83	5-6-7 (13)			
5				SS 3	78	8-8-6 (12)			
				SS 4	100	4-4-4 (8)			
10				SS 5	67	4-5-7 (12)			
		268.04	DECOMPOSED ROCK Brown, dark brown, gray, moist, very dense, silty SAND (SM) with mica and decomposed rock fragments.	SS 6	91	30-50/5"			>>
15									
			Caved in @ 19' 4"	SS 7	100	50/4"			>>
20									
				SS 8	100	18-30-38 (68)			>>
25									
		252.79	Bottom of hole at 28.8 feet.	SS 9	67	50/3"			>>

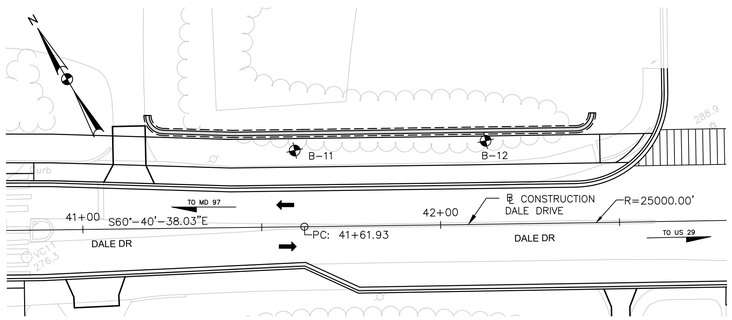
EL. 281.67
TOP OF LEVELING
PAD RW-02

KIM — KIM ENGINEERING, INC.
Consulting Geotechinical Engineers
Baltimore, Maryland

BORING NUMBER B-12
PAGE 1 OF 1

CLIENT Johnson, Mirmiran & Thompson
PROJECT NAME Dale Drive Pedestrian Facility
PROJECT NUMBER G21003
PROJECT LOCATION Silver Spring, MD
DATE STARTED 8/11/21 **COMPLETED** 8/11/21
GROUND ELEVATION 288.181 ft **HOLE SIZE** 6"
DRILLING CONTRACTOR Kim Engineering Inc.
GROUND WATER LEVELS:
DRILLING METHOD H.S.A
AT TIME OF DRILLING ---
LOGGED BY SE **CHECKED BY** TL
AT END OF DRILLING ---
NOTES N 488082.557 E 1304820.632
AFTER DRILLING ---

DEPTH (ft)	GRAPHIC LOG	ELEVATION	MATERIAL DESCRIPTION	SAMPLE TYPE NUMBER	RECOVERY % (RQD)	BLOW COUNTS (N VALUE)	POCKET PEN. (tsf)	DRY UNIT WT. (pcf)	▲ SPT N VALUE ▲ PL MC LL / ☐ FINES CONTENT (%) ☐ (20 40 60 80)
		287.85	4" Topsoil Brown, light brown, gray, dark gray, moist, loose to medium dense, silty SAND (SM) with mica.	SS 1	56	2-2-3 (5)			
				SS 2	78	3-3-4 (7)			
5				SS 3	89	3-3-4 (7)			
				SS 4	89	3-5-6 (11)			
10				SS 5	100	7-7-8 (15)			
			Caved in @ 14' 4"	SS 6	100	5-7-10 (17)			
15									
				SS 7	100	8-11-14 (25)			
20									
		266.68 266.64	Bedrock Bottom of hole at 21.5 feet.	SS 8	100	50/1"			>>



BORING LOCATION PLAN – RW-02
SCALE: 1" = 20'-0"

NOTES:

1. TEST BORINGS WERE DRILLED IN AUGUST, 2021 BY KIM ENGINEERING, INC.
2. BLOWS = BLOWS ON SPLIT BARREL SAMPLER BY A 140 POUND WEIGHT AND DRIVE WEIGHT ASSEMBLY FREELY FALLING 30 INCHES.
3. CASING IS METHOD OF MAINTAINING AN OPEN BOREHOLE.
4. W.L. = WATER TABLE LEVEL. FIGURE IN PARENTHESIS INDICATES READING IN HOURS AFTER COMPLETION OF BORING. CAVE = BORING CAVED IN AT ELEVATION INDICATED AND WATER LEVEL COULD NOT BE DETERMINED.
5. TEST BORINGS WERE DRILLED IN ACCORDANCE WITH AASHTO T206 AND ASTM D 1586. ROCK CORING IN ACCORDANCE WITH AASHTO T225 AND ASTM D 2113.
6. SOILD HAS BEEN IDENTIFIED BY A GEOTECHNICAL INSPECTOR.
7. UNDISTURBED SOIL SAMPLES ATTEMPTED ARE DESIGNATED AS 'SHELBY'.
8. THE BORING LOG SOIL SYMBOLS REFLECT ONLY THE MAJOR SOIL CONSTITUENT; FOR MORE COMPLETE SOIL CHARACTERISTICS REFER TO THE WRITTEN DESCRIPTION AT THE RESPECTIVE ELEVATION.
9. THE FIELD BORING LOGS RECORD OBSERVATIONS OF THE DRILLING OPERATIONS. THE LOGS ARE AVAILABLE UPON REQUEST

DRAFT
NOT FOR CONSTRUCTION

JMT

NO.	REVISION	DATE	BY

MONTGOMERY COUNTY
DEPARTMENT OF TRANSPORTATION
GAITHERSBURG, MARYLAND

RECOMMENDED FOR APPROVAL
Chief, Design Section — Date
APPROVED
Chief, Division of Transportation Engineering — Date

Designed by: WY Drawn by: CW Checked by: GGN

S-07
BORING AND DRIVE TESTS
DALE DRIVE
SHARED USE PATH

0 20' 40'
SCALE: 1"=20'
DATE: NOVEMBER 2022

CIP No. : 502109
SHEET 100 of 181

FILE NAME: Q:\2018\1804565_001_dale_drive_pedestria\CADD\Structures\pST_Boring & Drive Tests.dwg LAYOUT NAME: S-07 PLOTTED: Wednesday, November 23, 2022 - 7:39am USER: AHavener

BORING NUMBER B-13

PAGE 1 OF 1

KIM ENGINEERING, INC.
Consulting Geotechinical Engineers
Baltimore, Maryland

CLIENT Johnson, Mirmiran & Thompson
PROJECT NAME Dale Drive Pedestrian Facility
PROJECT NUMBER G21003
PROJECT LOCATION Silver Spring, MD
DATE STARTED 8/11/21 **COMPLETED** 8/11/21
GROUND ELEVATION 297.461 ft **HOLE SIZE** 6"
DRILLING CONTRACTOR Kim Engineering Inc.
GROUND WATER LEVELS:
DRILLING METHOD H.S.A
AT TIME OF DRILLING ---
LOGGED BY SE **CHECKED BY** TL
AT END OF DRILLING ---
NOTES N 488021.884 E 1304934.797
AFTER DRILLING ---

EL. 292.50
TOP OF LEVELING
PAD RW-03

DEPTH (ft)	ELEVATION	MATERIAL DESCRIPTION	SAMPLE TYPE NUMBER	RECOVERY % (RQD)	BLOW COUNTS (N VALUE)	POCKET PEN. (tsf)	DRY UNIT WT. (pcf)
	297.04	5" Topsoil Brown, light brown, gray, moist, very loose to medium dense, silty SAND (SM) with mica and gravel.	SS 1	56	1-1-1 (2)		
			SS 2	78	4-4-5 (9)		
5			SS 3	83	3-4-5 (9)		
			SS 4	100	5-6-8 (14)		
10			SS 5	100	5-6-7 (13)		
15			SS 6	89	8-11-10 (21)		
	278.96	DECOMPOSED ROCK Brown, dark brown, moist, very dense, silty SAND (SM) with mica and decomposed rock fragments.	SS 7	100	10-24-50/3"		
20	273.71	Bottom of hole at 23.8 feet.	SS 8	67	50/3"		

▲ SPT N VALUE ▲ PL MC LL
☐ FINES CONTENT (%) ☐
20 40 60 80

GEOTECH BH PLOTS DALE DRIVE PEDESTRIAN FACILITY.GPJ GINT.US.GDT 10/20/21

BORING NUMBER B-14

PAGE 1 OF 1

KIM ENGINEERING, INC.
Consulting Geotechinical Engineers
Baltimore, Maryland

CLIENT Johnson, Mirmiran & Thompson
PROJECT NAME Dale Drive Pedestrian Facility
PROJECT NUMBER G21003
PROJECT LOCATION Silver Spring, MD
DATE STARTED 8/12/21 **COMPLETED** 8/12/21
GROUND ELEVATION 304.060 ft **HOLE SIZE** 6"
DRILLING CONTRACTOR Kim Engineering Inc.
GROUND WATER LEVELS:
DRILLING METHOD H.S.A
AT TIME OF DRILLING ---
LOGGED BY SE **CHECKED BY** TL
AT END OF DRILLING ---
NOTES N 487984.454 E 1305002.598
AFTER DRILLING ---

EL. 298.00
TOP OF LEVELING
PAD RW-03

DEPTH (ft)	ELEVATION	MATERIAL DESCRIPTION	SAMPLE TYPE NUMBER	RECOVERY % (RQD)	BLOW COUNTS (N VALUE)	POCKET PEN. (tsf)	DRY UNIT WT. (pcf)
	303.77	3.5" Topsoil Brown, light brown, moist, very loose to medium dense, silty SAND (SM) with mica and gravel.	SS 1	67	1-2-2 (4)		
			SS 2	56	6-7-8 (15)		
5			SS 3	67	8-7-7 (14)		
			SS 4	100	5-5-5 (10)		
10			SS 5	100	4-5-6 (11)		
15	290.56	DECOMPOSED ROCK Dark brown, light brown, gray, moist, very dense, silty SAND (SM) with mica and decomposed rock fragments. Caved in @ 13' 11"	SS 6	100	50/5"		
			SS 7	100	50/2"		
20	281.98	Bottom of hole at 22.1 feet.	SS 8	100	50/1"		

▲ SPT N VALUE ▲ PL MC LL
☐ FINES CONTENT (%) ☐
20 40 60 80

GEOTECH BH PLOTS DALE DRIVE PEDESTRIAN FACILITY.GPJ GINT.US.GDT 10/20/21

BORING NUMBER B-15

PAGE 1 OF 1

KIM ENGINEERING, INC.
Consulting Geotechinical Engineers
Baltimore, Maryland

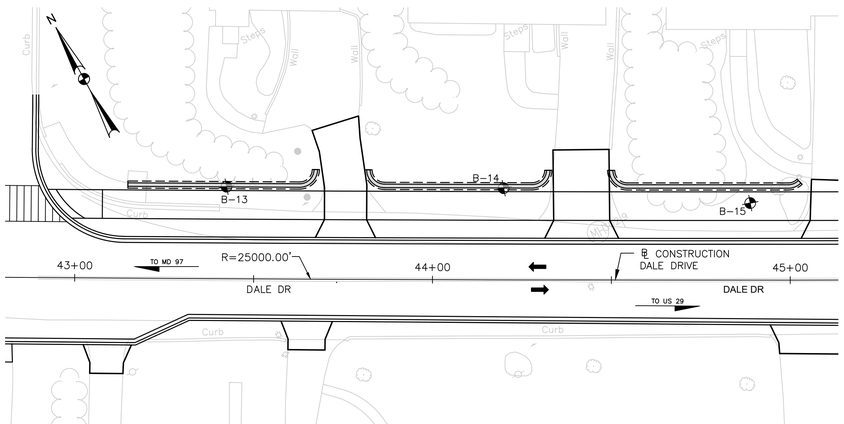
CLIENT Johnson, Mirmiran & Thompson
PROJECT NAME Dale Drive Pedestrian Facility
PROJECT NUMBER G21003
PROJECT LOCATION Silver Spring, MD
DATE STARTED 8/12/21 **COMPLETED** 8/12/21
GROUND ELEVATION 308.213 ft **HOLE SIZE** 6"
DRILLING CONTRACTOR Kim Engineering Inc.
GROUND WATER LEVELS:
DRILLING METHOD H.S.A
AT TIME OF DRILLING ---
LOGGED BY SE **CHECKED BY** TL
AT END OF DRILLING ---
NOTES N 487947.820 E 1305061.103
AFTER DRILLING ---

EL. 302.83 TOP
OF LEVELING
PAD RW-03

DEPTH (ft)	ELEVATION	MATERIAL DESCRIPTION	SAMPLE TYPE NUMBER	RECOVERY % (RQD)	BLOW COUNTS (N VALUE)	POCKET PEN. (tsf)	DRY UNIT WT. (pcf)
		6" Topsoil					
	307.71	Brown, moist, loose to medium dense, silty SAND (SM) with mica.	SS 1	44	1-3-4 (7)		
			SS 2	67	4-5-6 (11)		
5			SS 3	39	4-4-5 (9)		
	300.71	DECOMPOSED ROCK Brown, dark brown, gray, moist, very dense, silty SAND (SM) with mica and decomposed rock fragmentS.	SS 4	100	40-50		
10			SS 5	100	50/2"		
			SS 6	100	50/1"		
15	293.21 293.17	Bedrock Bottom of hole at 15.0 feet.	SS 7	100	50/1"		

▲ SPT N VALUE ▲ PL MC LL
☐ FINES CONTENT (%) ☐
20 40 60 80

GEOTECH BH PLOTS DALE DRIVE PEDESTRIAN FACILITY.GPJ GINT.US.GDT 10/20/21



BORING LOCATION PLAN – RW-03.1
SCALE: 1" = 20'-0"

NOTES:

1. TEST BORINGS WERE DRILLED IN AUGUST, 2021 BY KIM ENGINEERING, INC.
2. BLOWS = BLOWS ON SPLIT BARREL SAMPLER BY A 140 POUND WEIGHT AND DRIVE WEIGHT ASSEMBLY FREELY FALLING 30 INCHES.
3. CASING IS METHOD OF MAINTAINING AN OPEN BOREHOLE.
4. W.L. = WATER TABLE LEVEL. FIGURE IN PARENTHESIS INDICATES READING IN HOURS AFTER COMPLETION OF BORING. CAVE = BORING CAVED IN AT ELEVATION INDICATED AND WATER LEVEL COULD NOT BE DETERMINED.
5. TEST BORINGS WERE DRILLED IN ACCORDANCE WITH AASHTO T206 AND ASTM D 1586. ROCK CORING IN ACCORDANCE WITH AASHTO T225 AND ASTM D 2113.
6. SOILD HAS BEEN IDENTIFIED BY A GEOTECHNICAL INSPECTOR.
7. UNDISTURBED SOIL SAMPLES ATTEMPTED ARE DESIGNATED AS 'SHELBY'.
8. THE BORING LOG SOIL SYMBOLS REFLECT ONLY THE MAJOR SOIL CONSTITUENT; FOR MORE COMPLETE SOIL CHARACTERISTICS REFER TO THE WRITTEN DESCRIPTION AT THE RESPECTIVE ELEVATION.
9. THE FIELD BORING LOGS RECORD OBSERVATIONS OF THE DRILLING OPERATIONS. THE LOGS ARE AVAILABLE UPON REQUEST

DRAFT
NOT FOR CONSTRUCTION

JMT

NO.	REVISION	DATE	BY

MONTGOMERY COUNTY
DEPARTMENT OF TRANSPORTATION
GAITHERSBURG, MARYLAND

RECOMMENDED FOR APPROVAL
Chief, Design Section — Date
APPROVED
Chief, Division of Transportation Engineering — Date

Designed by: WY Drawn by: CW Checked by: GGN

S-08
BORING AND DRIVE TESTS
DALE DRIVE
SHARED USE PATH

0 20' 40'
SCALE: 1"=20' DATE: NOVEMBER 2022

CIP No. : 502109 SHEET 101 of 181

EL. 277.00
TOP OF LEVELING
PAD RW-02

KIM — KIM ENGINEERING, INC.
Consulting Geotechinical Engineers
Baltimore, Maryland

BORING NUMBER B-11
PAGE 1 OF 1

CLIENT Johnson, Mirmiran & Thompson
PROJECT NAME Dale Drive Pedestrian Facility
PROJECT NUMBER G21003
PROJECT LOCATION Silver Spring, MD
DATE STARTED 8/11/21 **COMPLETED** 8/11/21
GROUND ELEVATION 281.544 ft **HOLE SIZE** 6"
DRILLING CONTRACTOR Kim Engineering Inc.
GROUND WATER LEVELS:
DRILLING METHOD H.S.A
AT TIME OF DRILLING ---
LOGGED BY SE **CHECKED BY** TL
AT END OF DRILLING ---
NOTES N 488106.916 E 1304773.076
AFTER DRILLING ---

DEPTH (ft)	GRAPHIC LOG	ELEVATION	MATERIAL DESCRIPTION	SAMPLE TYPE NUMBER	RECOVERY % (RQD)	BLOW COUNTS (N VALUE)	POCKET PEN. (tsf)	DRY UNIT WT. (pcf)	▲ SPT N VALUE ▲ PL MC LL / ☐ FINES CONTENT (%) ☐ (20 40 60 80)
		281.29	3" Topsoil Brown, light brown, moist, loose to medium dense, silty SAND (SM) with mica and gravel.	SS 1	67	1-2-3 (5)			
				SS 2	83	5-6-7 (13)			
5				SS 3	78	8-8-6 (12)			
				SS 4	100	4-4-4 (8)			
10				SS 5	67	4-5-7 (12)			
		268.04	DECOMPOSED ROCK Brown, dark brown, gray, moist, very dense, silty SAND (SM) with mica and decomposed rock fragments.	SS 6	91	30-50/5"			>>
15									
			Caved in @ 19' 4"	SS 7	100	50/4"			>>
20									
				SS 8	100	18-30-38 (68)			>>
25									
		252.79	Bottom of hole at 28.8 feet.	SS 9	67	50/3"			>>

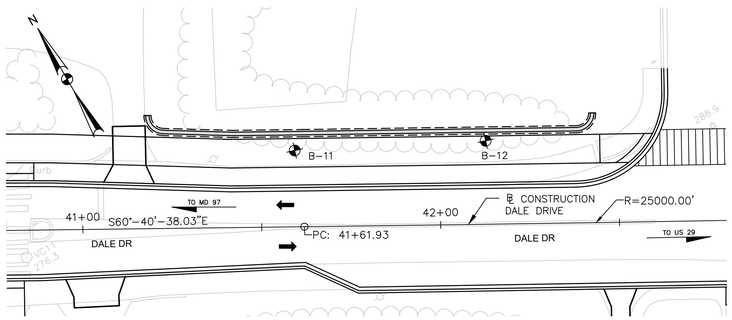
EL. 281.67
TOP OF LEVELING
PAD RW-02

KIM — KIM ENGINEERING, INC.
Consulting Geotechinical Engineers
Baltimore, Maryland

BORING NUMBER B-12
PAGE 1 OF 1

CLIENT Johnson, Mirmiran & Thompson
PROJECT NAME Dale Drive Pedestrian Facility
PROJECT NUMBER G21003
PROJECT LOCATION Silver Spring, MD
DATE STARTED 8/11/21 **COMPLETED** 8/11/21
GROUND ELEVATION 288.181 ft **HOLE SIZE** 6"
DRILLING CONTRACTOR Kim Engineering Inc.
GROUND WATER LEVELS:
DRILLING METHOD H.S.A
AT TIME OF DRILLING ---
LOGGED BY SE **CHECKED BY** TL
AT END OF DRILLING ---
NOTES N 488082.557 E 1304820.632
AFTER DRILLING ---

DEPTH (ft)	GRAPHIC LOG	ELEVATION	MATERIAL DESCRIPTION	SAMPLE TYPE NUMBER	RECOVERY % (RQD)	BLOW COUNTS (N VALUE)	POCKET PEN. (tsf)	DRY UNIT WT. (pcf)	▲ SPT N VALUE ▲ PL MC LL / ☐ FINES CONTENT (%) ☐ (20 40 60 80)
		287.85	4" Topsoil Brown, light brown, gray, dark gray, moist, loose to medium dense, silty SAND (SM) with mica.	SS 1	56	2-2-3 (5)			
				SS 2	78	3-3-4 (7)			
5				SS 3	89	3-3-4 (7)			
				SS 4	89	3-5-6 (11)			
10				SS 5	100	7-7-8 (15)			
			Caved in @ 14' 4"	SS 6	100	5-7-10 (17)			
15									
				SS 7	100	8-11-14 (25)			
20									
		266.68 266.64	Bedrock Bottom of hole at 21.5 feet.	SS 8	100	50/1"			>>



BORING LOCATION PLAN – RW-02
SCALE: 1" = 20'-0"

NOTES:

1. TEST BORINGS WERE DRILLED IN AUGUST, 2021 BY KIM ENGINEERING, INC.
2. BLOWS = BLOWS ON SPLIT BARREL SAMPLER BY A 140 POUND WEIGHT AND DRIVE WEIGHT ASSEMBLY FREELY FALLING 30 INCHES.
3. CASING IS METHOD OF MAINTAINING AN OPEN BOREHOLE.
4. W.L. = WATER TABLE LEVEL. FIGURE IN PARENTHESIS INDICATES READING IN HOURS AFTER COMPLETION OF BORING. CAVE = BORING CAVED IN AT ELEVATION INDICATED AND WATER LEVEL COULD NOT BE DETERMINED.
5. TEST BORINGS WERE DRILLED IN ACCORDANCE WITH AASHTO T206 AND ASTM D 1586. ROCK CORING IN ACCORDANCE WITH AASHTO T225 AND ASTM D 2113.
6. SOILD HAS BEEN IDENTIFIED BY A GEOTECHNICAL INSPECTOR.
7. UNDISTURBED SOIL SAMPLES ATTEMPTED ARE DESIGNATED AS 'SHELBY'.
8. THE BORING LOG SOIL SYMBOLS REFLECT ONLY THE MAJOR SOIL CONSTITUENT; FOR MORE COMPLETE SOIL CHARACTERISTICS REFER TO THE WRITTEN DESCRIPTION AT THE RESPECTIVE ELEVATION.
9. THE FIELD BORING LOGS RECORD OBSERVATIONS OF THE DRILLING OPERATIONS. THE LOGS ARE AVAILABLE UPON REQUEST

DRAFT
NOT FOR CONSTRUCTION

JMT

NO.	REVISION	DATE	BY

MONTGOMERY COUNTY
DEPARTMENT OF TRANSPORTATION
GAITHERSBURG, MARYLAND

RECOMMENDED FOR APPROVAL
Chief, Design Section — Date
APPROVED
Chief, Division of Transportation Engineering — Date

Designed by: WY Drawn by: CW Checked by: GGN

S-07
BORING AND DRIVE TESTS
DALE DRIVE
SHARED USE PATH

0 20' 40'
SCALE: 1"=20'
DATE: NOVEMBER 2022

CIP No. : 502109
SHEET 100 of 181

FILE NAME: Q:\2018\1804565_001_dale_drive_pedestria\CADD\Structures\pST_Boring & Drive Tests.dwg LAYOUT NAME: S-07 PLOTTED: Wednesday, November 23, 2022 - 7:39am USER: AHavener

BORING NUMBER B-13

PAGE 1 OF 1

KIM ENGINEERING, INC.
Consulting Geotechinical Engineers
Baltimore, Maryland

CLIENT Johnson, Mirmiran & Thompson
PROJECT NAME Dale Drive Pedestrian Facility
PROJECT NUMBER G21003
PROJECT LOCATION Silver Spring, MD
DATE STARTED 8/11/21 **COMPLETED** 8/11/21
GROUND ELEVATION 297.461 ft **HOLE SIZE** 6"
DRILLING CONTRACTOR Kim Engineering Inc.
GROUND WATER LEVELS:
DRILLING METHOD H.S.A
AT TIME OF DRILLING ---
LOGGED BY SE **CHECKED BY** TL
AT END OF DRILLING ---
NOTES N 488021.884 E 1304934.797
AFTER DRILLING ---

EL. 292.50
TOP OF LEVELING
PAD RW-03

DEPTH (ft)	ELEVATION	MATERIAL DESCRIPTION	SAMPLE TYPE NUMBER	RECOVERY % (RQD)	BLOW COUNTS (N VALUE)	POCKET PEN. (tsf)	DRY UNIT WT. (pcf)
	297.04	5" Topsoil Brown, light brown, gray, moist, very loose to medium dense, silty SAND (SM) with mica and gravel.	SS 1	56	1-1-1 (2)		
			SS 2	78	4-4-5 (9)		
5			SS 3	83	3-4-5 (9)		
			SS 4	100	5-6-8 (14)		
10			SS 5	100	5-6-7 (13)		
15			SS 6	89	8-11-10 (21)		
	278.96	DECOMPOSED ROCK Brown, dark brown, moist, very dense, silty SAND (SM) with mica and decomposed rock fragments.	SS 7	100	10-24-50/3"		
20	273.71	Bottom of hole at 23.8 feet.	SS 8	67	50/3"		

▲ SPT N VALUE ▲ PL MC LL
☐ FINES CONTENT (%) ☐
20 40 60 80

GEOTECH BH PLOTS DALE DRIVE PEDESTRIAN FACILITY.GPJ GINT.US.GDT 10/20/21

BORING NUMBER B-14

PAGE 1 OF 1

KIM ENGINEERING, INC.
Consulting Geotechinical Engineers
Baltimore, Maryland

CLIENT Johnson, Mirmiran & Thompson
PROJECT NAME Dale Drive Pedestrian Facility
PROJECT NUMBER G21003
PROJECT LOCATION Silver Spring, MD
DATE STARTED 8/12/21 **COMPLETED** 8/12/21
GROUND ELEVATION 304.060 ft **HOLE SIZE** 6"
DRILLING CONTRACTOR Kim Engineering Inc.
GROUND WATER LEVELS:
DRILLING METHOD H.S.A
AT TIME OF DRILLING ---
LOGGED BY SE **CHECKED BY** TL
AT END OF DRILLING ---
NOTES N 487984.454 E 1305002.598
AFTER DRILLING ---

EL. 298.00
TOP OF LEVELING
PAD RW-03

DEPTH (ft)	ELEVATION	MATERIAL DESCRIPTION	SAMPLE TYPE NUMBER	RECOVERY % (RQD)	BLOW COUNTS (N VALUE)	POCKET PEN. (tsf)	DRY UNIT WT. (pcf)
	303.77	3.5" Topsoil Brown, light brown, moist, very loose to medium dense, silty SAND (SM) with mica and gravel.	SS 1	67	1-2-2 (4)		
			SS 2	56	6-7-8 (15)		
5			SS 3	67	8-7-7 (14)		
			SS 4	100	5-5-5 (10)		
10			SS 5	100	4-5-6 (11)		
15	290.56	DECOMPOSED ROCK Dark brown, light brown, gray, moist, very dense, silty SAND (SM) with mica and decomposed rock fragments. Caved in @ 13' 11"	SS 6	100	50/5"		
			SS 7	100	50/2"		
20	281.98	Bottom of hole at 22.1 feet.	SS 8	100	50/1"		

▲ SPT N VALUE ▲ PL MC LL
☐ FINES CONTENT (%) ☐
20 40 60 80

GEOTECH BH PLOTS DALE DRIVE PEDESTRIAN FACILITY.GPJ GINT.US.GDT 10/20/21

BORING NUMBER B-15

PAGE 1 OF 1

KIM ENGINEERING, INC.
Consulting Geotechinical Engineers
Baltimore, Maryland

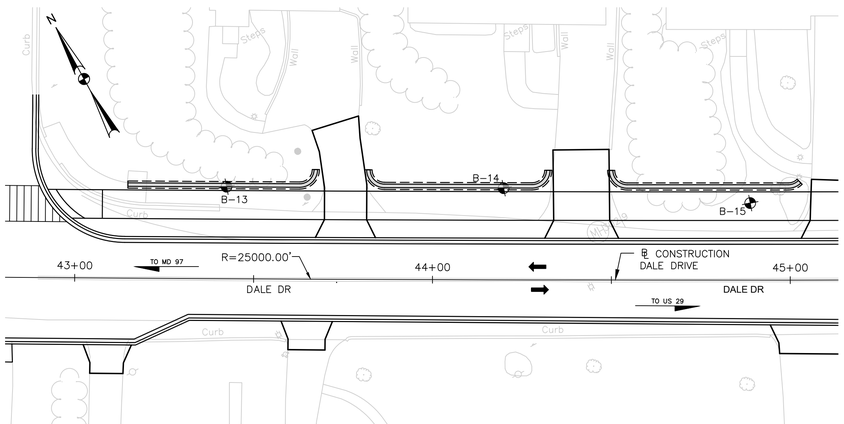
CLIENT Johnson, Mirmiran & Thompson
PROJECT NAME Dale Drive Pedestrian Facility
PROJECT NUMBER G21003
PROJECT LOCATION Silver Spring, MD
DATE STARTED 8/12/21 **COMPLETED** 8/12/21
GROUND ELEVATION 308.213 ft **HOLE SIZE** 6"
DRILLING CONTRACTOR Kim Engineering Inc.
GROUND WATER LEVELS:
DRILLING METHOD H.S.A
AT TIME OF DRILLING ---
LOGGED BY SE **CHECKED BY** TL
AT END OF DRILLING ---
NOTES N 487947.820 E 1305061.103
AFTER DRILLING ---

EL. 302.83 TOP
OF LEVELING
PAD RW-03

DEPTH (ft)	ELEVATION	MATERIAL DESCRIPTION	SAMPLE TYPE NUMBER	RECOVERY % (RQD)	BLOW COUNTS (N VALUE)	POCKET PEN. (tsf)	DRY UNIT WT. (pcf)
		6" Topsoil					
	307.71	Brown, moist, loose to medium dense, silty SAND (SM) with mica.	SS 1	44	1-3-4 (7)		
			SS 2	67	4-5-6 (11)		
5			SS 3	39	4-4-5 (9)		
	300.71	DECOMPOSED ROCK Brown, dark brown, gray, moist, very dense, silty SAND (SM) with mica and decomposed rock fragmentS.	SS 4	100	40-50		
10			SS 5	100	50/2"		
			SS 6	100	50/1"		
15	293.21 293.17	Bedrock Bottom of hole at 15.0 feet.	SS 7	100	50/1"		

▲ SPT N VALUE ▲ PL MC LL
☐ FINES CONTENT (%) ☐
20 40 60 80

GEOTECH BH PLOTS DALE DRIVE PEDESTRIAN FACILITY.GPJ GINT.US.GDT 10/20/21



BORING LOCATION PLAN – RW-03.1
SCALE: 1" = 20'-0"

NOTES:

1. TEST BORINGS WERE DRILLED IN AUGUST, 2021 BY KIM ENGINEERING, INC.
2. BLOWS = BLOWS ON SPLIT BARREL SAMPLER BY A 140 POUND WEIGHT AND DRIVE WEIGHT ASSEMBLY FREELY FALLING 30 INCHES.
3. CASING IS METHOD OF MAINTAINING AN OPEN BOREHOLE.
4. W.L. = WATER TABLE LEVEL. FIGURE IN PARENTHESIS INDICATES READING IN HOURS AFTER COMPLETION OF BORING. CAVE = BORING CAVED IN AT ELEVATION INDICATED AND WATER LEVEL COULD NOT BE DETERMINED.
5. TEST BORINGS WERE DRILLED IN ACCORDANCE WITH AASHTO T206 AND ASTM D 1586. ROCK CORING IN ACCORDANCE WITH AASHTO T225 AND ASTM D 2113.
6. SOILD HAS BEEN IDENTIFIED BY A GEOTECHNICAL INSPECTOR.
7. UNDISTURBED SOIL SAMPLES ATTEMPTED ARE DESIGNATED AS 'SHELBY'.
8. THE BORING LOG SOIL SYMBOLS REFLECT ONLY THE MAJOR SOIL CONSTITUENT; FOR MORE COMPLETE SOIL CHARACTERISTICS REFER TO THE WRITTEN DESCRIPTION AT THE RESPECTIVE ELEVATION.
9. THE FIELD BORING LOGS RECORD OBSERVATIONS OF THE DRILLING OPERATIONS. THE LOGS ARE AVAILABLE UPON REQUEST

DRAFT
NOT FOR CONSTRUCTION

JMT

NO.	REVISION	DATE	BY

MONTGOMERY COUNTY
DEPARTMENT OF TRANSPORTATION
GAITHERSBURG, MARYLAND

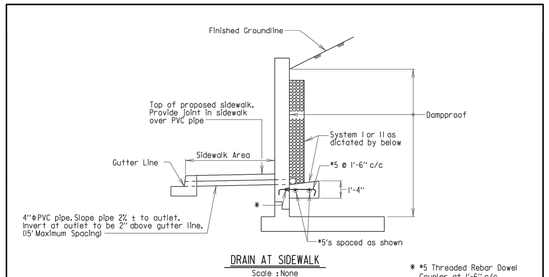
RECOMMENDED FOR APPROVAL
Chief, Design Section — Date
APPROVED
Chief, Division of Transportation Engineering — Date

Designed by: WY Drawn by: CW Checked by: GGN

S-08
BORING AND DRIVE TESTS
DALE DRIVE
SHARED USE PATH

0 20' 40'
SCALE: 1"=20' DATE: NOVEMBER 2022

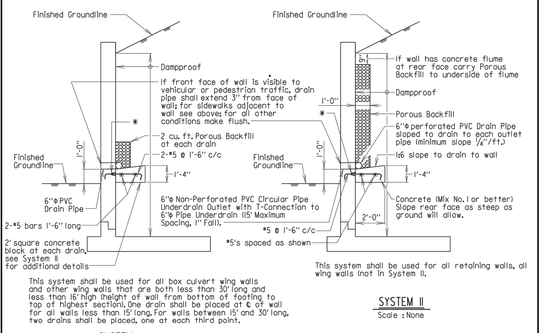
CIP No. : 502109 SHEET 101 of 181



DRAIN AT SIDEWALK

Scale :None

* #5 Threaded Rebar Dowel Coupler at 1'-6" c/c.



This system shall be used for all box culvert wing walls and other wing walls that are both less than 30' long and less than 16' high (height of wall from bottom of footing to top of highest section). One drain shall be placed at E of wall for all walls less than 15' long. For walls between 15' and 30' long, two drains shall be placed, one at each third point.

SYSTEM I

Scale :None

This system shall be used for all retaining walls, all wing walls (not in System I).

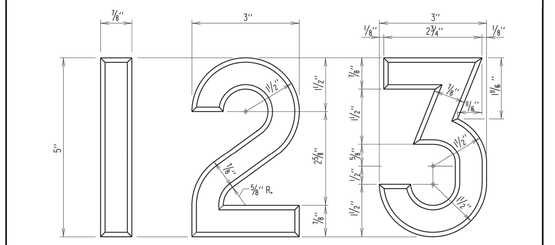
SYSTEM II

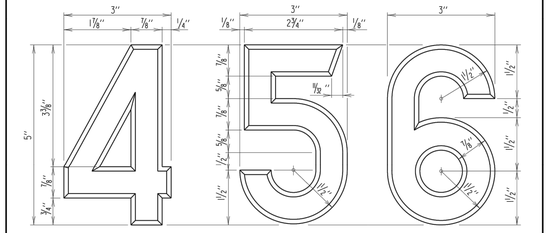
Scale :None

Note:
1. Exact elevation of drain to be determined by Engineer in field.
2. Porous backfill (refer to Section 469).
3. Use this detail for bridges with wing walls that are not parallel to the highway. For bridges with wing walls parallel to the highway see Detail No. SUB-DR-203 sheet 5 of 5 for details.

APPROVAL	STATE OF MARYLAND DEPARTMENT OF TRANSPORTATION STATE HIGHWAY ADMINISTRATION OFFICE OF STRUCTURES	
DIRECTOR OFFICE OF STRUCTURES DATE: 01/22/2001	RETAINING WALL AND WING WALL DRAINAGE SYSTEMS	
VERSION 1.0	DETAIL NO. RW-301	SHEET 1 OF 1

RETAINING WALLS

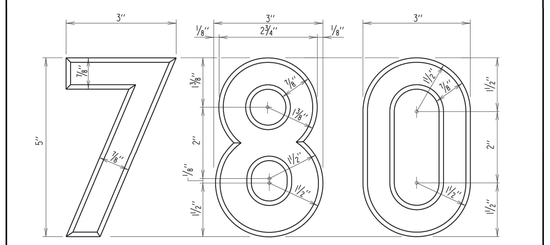


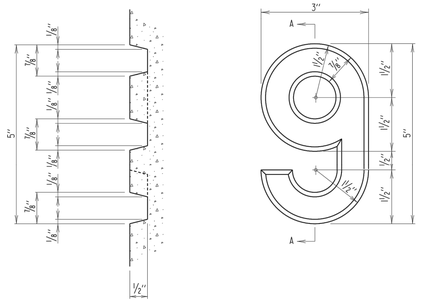


Note:
Year built numerals to be indented into concrete (unpainted) - as indicated on Detail Nos. SI-101, SI-103 and SI-104.

APPROVAL	STATE OF MARYLAND DEPARTMENT OF TRANSPORTATION STATE HIGHWAY ADMINISTRATION OFFICE OF STRUCTURES	
DIRECTOR OFFICE OF STRUCTURES DATE: 11/5/2019	NUMERALS FOR YEAR BUILT MARKING ON STRUCTURES	
VERSION 1.01	DETAIL NO. SI-201	SHEET 1 OF 2

STRUCTURE INVENTORY





SECTION A-A

APPROVAL	STATE OF MARYLAND DEPARTMENT OF TRANSPORTATION STATE HIGHWAY ADMINISTRATION OFFICE OF STRUCTURES	
DIRECTOR OFFICE OF STRUCTURES DATE: 11/5/2019	NUMERALS FOR YEAR BUILT MARKING ON STRUCTURES	
VERSION 1.01	DETAIL NO. SI-201	SHEET 2 OF 2

STRUCTURE INVENTORY

DRAFT
NOT FOR CONSTRUCTION

NO.	REVISION	DATE	BY

MONTGOMERY COUNTY
DEPARTMENT OF TRANSPORTATION
GAITHERSBURG, MARYLAND

RECOMMENDED FOR APPROVAL

Chief, Design Section — Date

APPROVED

Chief, Division of Transportation Engineering — Date

Designed by: WY Drawn by: TNB Checked by: GGN

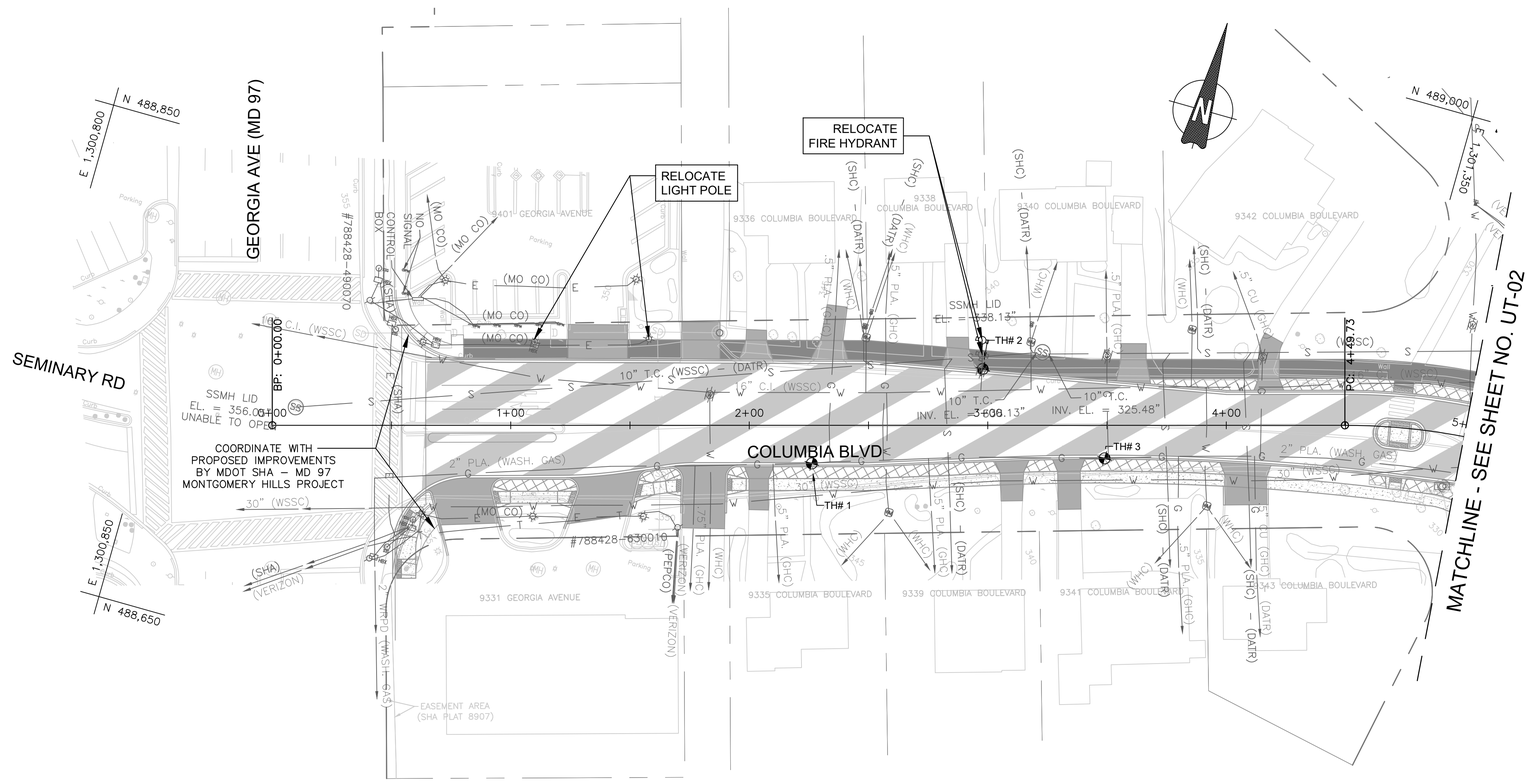
S-11
STANDARD STRUCTURAL DETAILS

DALE DRIVE
SHARED USE PATH

SCALE: NONE DATE: NOVEMBER 2022

CIP No. : 502109 SHEET 104 of 181

FILE NAME: Q:\2018\1804565_001_dale_drive_pedestria\CADD\Structures\pST_Standard Details.dwg LAYOUT NAME: S-11 PLOTTED: Wednesday, November 23, 2022 - 7:40am USER: AHavener



Utility Test Pit Data				
Point #	Description	Depth	Northing	Easting
1	GAS	3.51'	488784.7581	1301122.2560
2	WATER	6.50'	488842.3063	1301180.4916
3	GAS	3.34'	488820.1296	1301239.8123

DRAFT
NOT FOR CONSTRUCTION

NO.	REVISION	DATE	BY

MONTGOMERY COUNTY
DEPARTMENT OF TRANSPORTATION
GAITHERSBURG, MARYLAND

RECOMMENDED FOR APPROVAL

Chief, Design Section — Date

APPROVED

Chief, Division of Transportation Engineering — Date

Designed by: ADH Drawn by: TRS Checked by: JJR

UT-01
UTILITY PLAN
DALE DRIVE
SHARED USE PATH

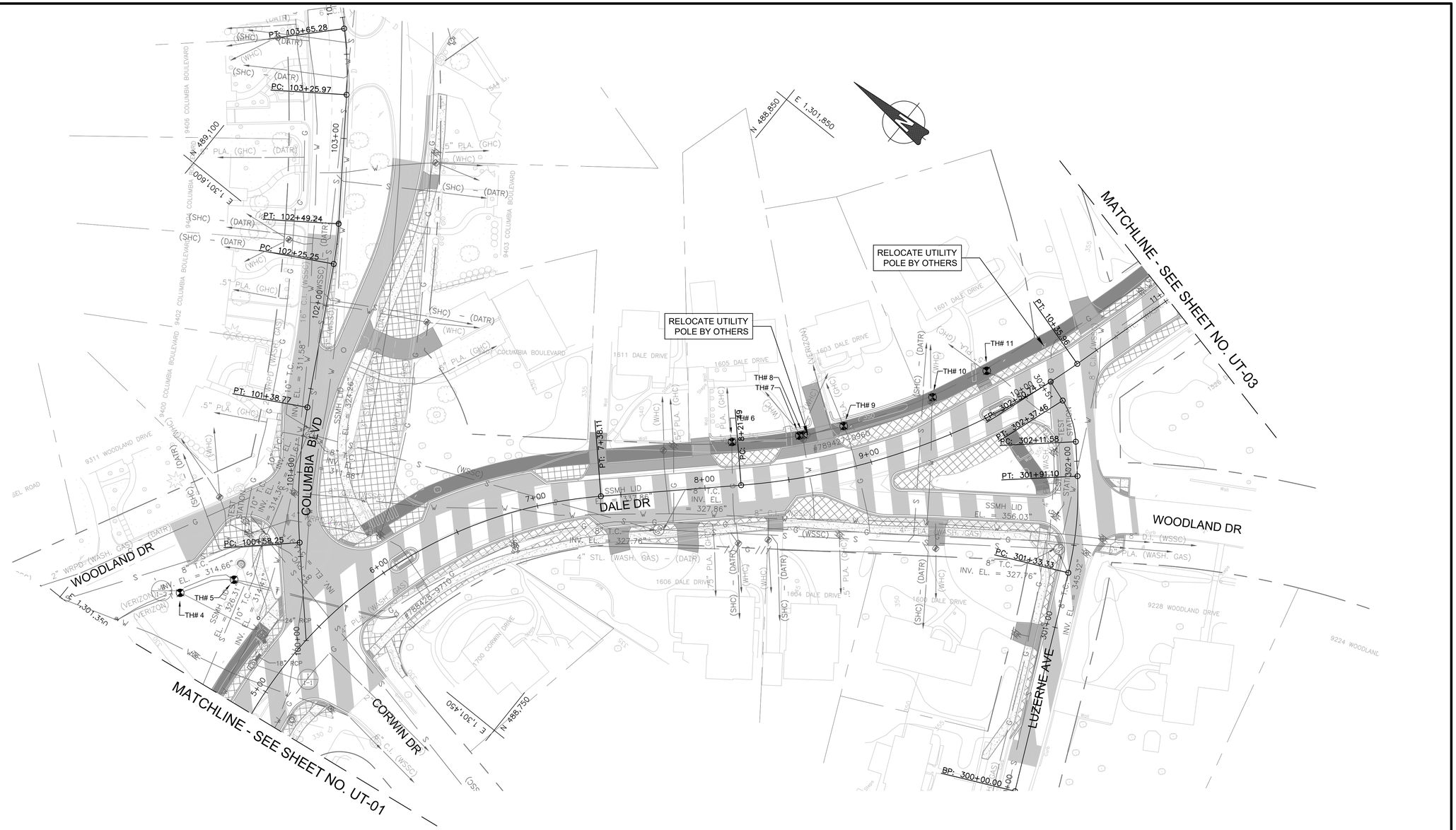
0 30' 60'

SCALE: 1"=30'

DATE: NOVEMBER 2022

CIP No. : 502109

SHEET 105 of 181



Utility Test Pit Data				
Point #	Description	Depth	Northing	Easting
4	CANCELLED	0.00'	488946.0262	1301396.2299
5	VERIZON	3.13'	488925.9936	1301422.3991
6	GAS	1.98'	488747.5122	1301671.3586
7	N.U.F.	0.00'	488718.8152	1301699.3271
8	N.U.F.	0.00'	488717.1108	1301701.0559
9	GAS	2.61'	488701.9176	1301720.2780
10	WATER	5.59'	488671.6430	1301766.6353
11	GAS	3.05'	488656.5092	1301799.0144

DRAFT
NOT FOR CONSTRUCTION

JMT

NO.	REVISION	DATE	BY

MONTGOMERY COUNTY
DEPARTMENT OF TRANSPORTATION
GAITHERSBURG, MARYLAND

RECOMMENDED FOR APPROVAL

Chief, Design Section — Date

APPROVED

Chief, Division of Transportation Engineering — Date

Designed by: ADH Drawn by: TRS Checked by: JJR

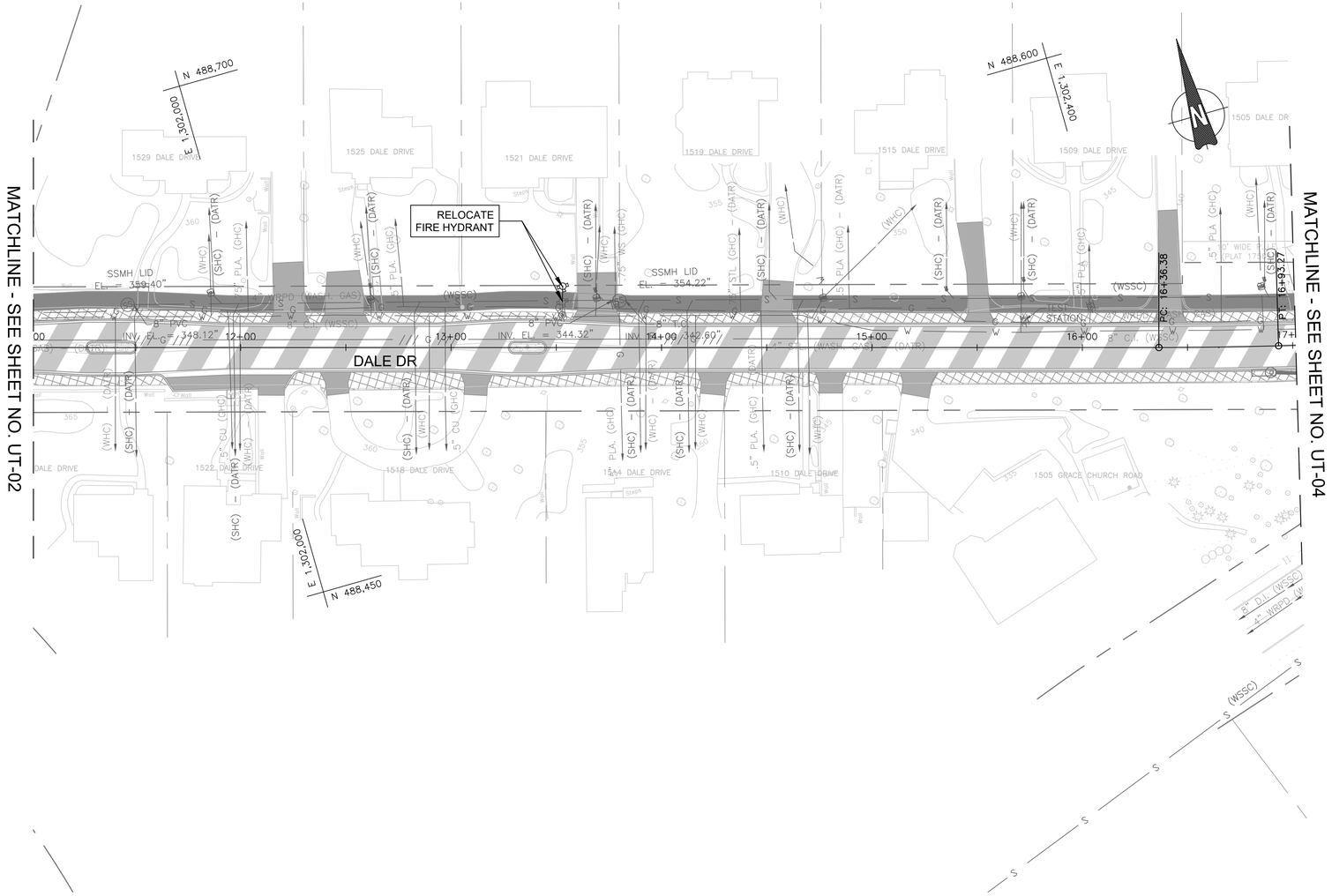
UT-02
UTILITY PLAN
DALE DRIVE
SHARED USE PATH

0 30' 60'

SCALE: 1"=30' DATE: NOVEMBER 2022

CIP No. : 502109 SHEET 106 of 181

FILE NAME: Q:\2018\1804565_001_Dale_Drive_Pedestria\CADD\pUT_Dale.dwg LAYOUT NAME: UT-02 PLOTTED: Tuesday, November 22, 2022 – 7:33pm USER: AHavener



DRAFT
NOT FOR CONSTRUCTION

JMT

NO.	REVISION	DATE	BY

MONTGOMERY COUNTY
DEPARTMENT OF TRANSPORTATION
GAITHERSBURG, MARYLAND

RECOMMENDED FOR APPROVAL

Chief, Design Section — Date

APPROVED

Chief, Division of Transportation Engineering — Date

Designed by: ADH Drawn by: TRS Checked by: JJR

UT-03
UTILITY PLAN
DALE DRIVE
SHARED USE PATH

0 30' 60'

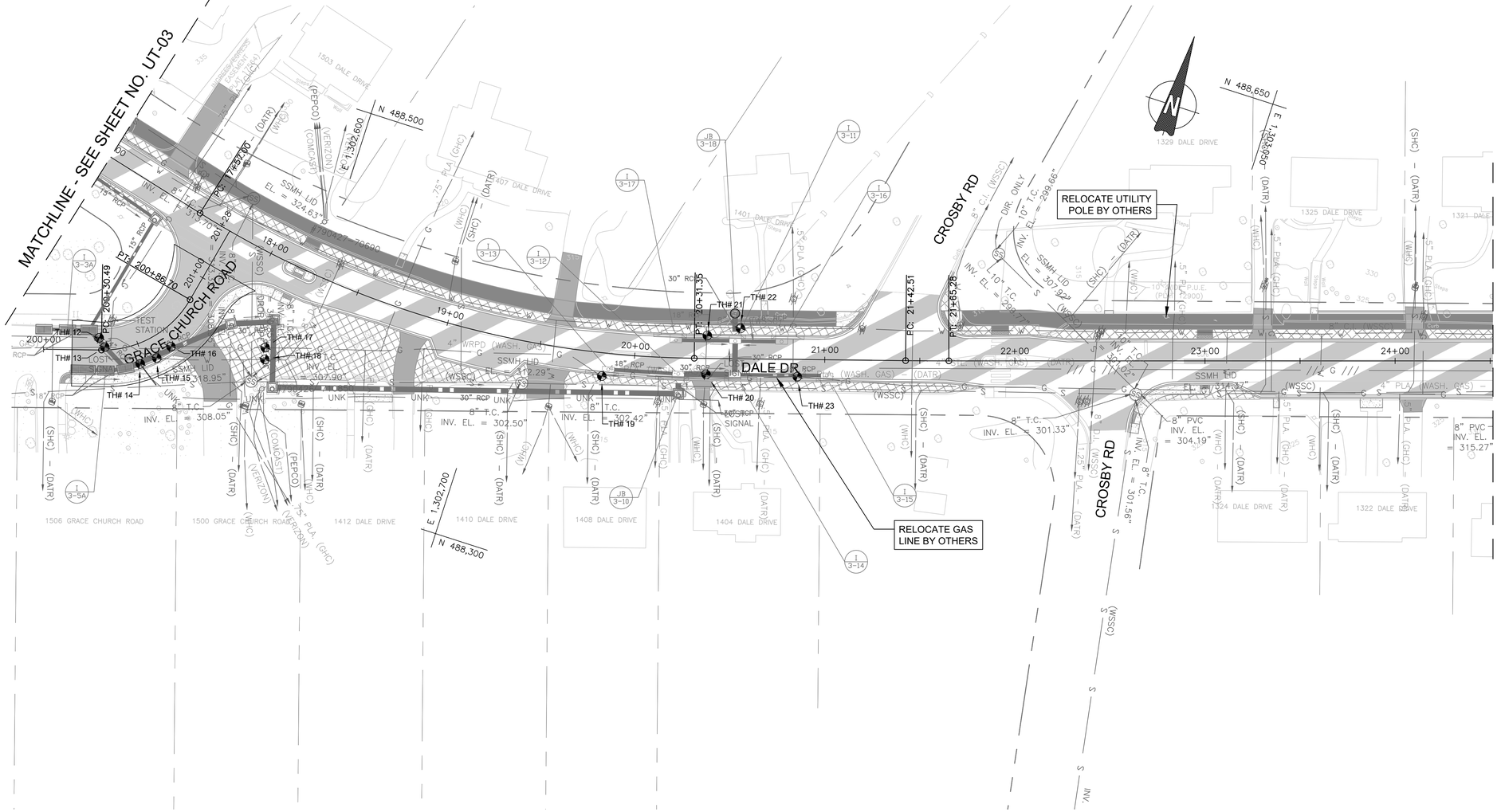
SCALE: 1"=30'

DATE: NOVEMBER 2022

CIP No.: 502109

SHEET 107 of 181

FILE NAME: Q:\2018\1804565_001_Dale_Drive_Pedestria\CADD\pUT_Dale.dwg LAYOUT NAME: UT-03 PLOTTED: Tuesday, November 22, 2022 – 7:33pm USER: AHavener



Utility Test Pit Data				
Point #	Description	Depth	Northing	Easting
12	WATER	3.79'	488343.7794	1302499.7489
13	GAS	3.11'	488340.0436	1302504.0603
14	UNKNOWN	3.02'	488337.4063	1302524.5118
15	WATER	3.72'	488342.9407	1302531.8129
16	GAS	3.52'	488350.9973	1302537.1146
17	N.U.F.	0.00'	488365.6244	1302584.4613
18	WATER	4.02'	488359.6792	1302586.1184
19	GAS	3.57'	488405.5952	1302757.5896
20	WATER	4.06'	488423.2740	1302809.4913
21	WATER	1.99'	488442.9457	1302803.8506
22	WATER	4.29'	488451.8280	1302819.3272
23	GAS	2.68'	488436.7834	1302855.5336

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NOT FOR CONSTRUCTION

NO.	REVISION	DATE	BY

MONTGOMERY COUNTY
DEPARTMENT OF TRANSPORTATION
GAITHERSBURG, MARYLAND

RECOMMENDED FOR APPROVAL

Chief, Design Section — Date

APPROVED

Chief, Division of Transportation Engineering — Date

Designed by: ADH Drawn by: TRS Checked by: JJR

UT-04
UTILITY PLAN
DALE DRIVE SHARED USE PATH

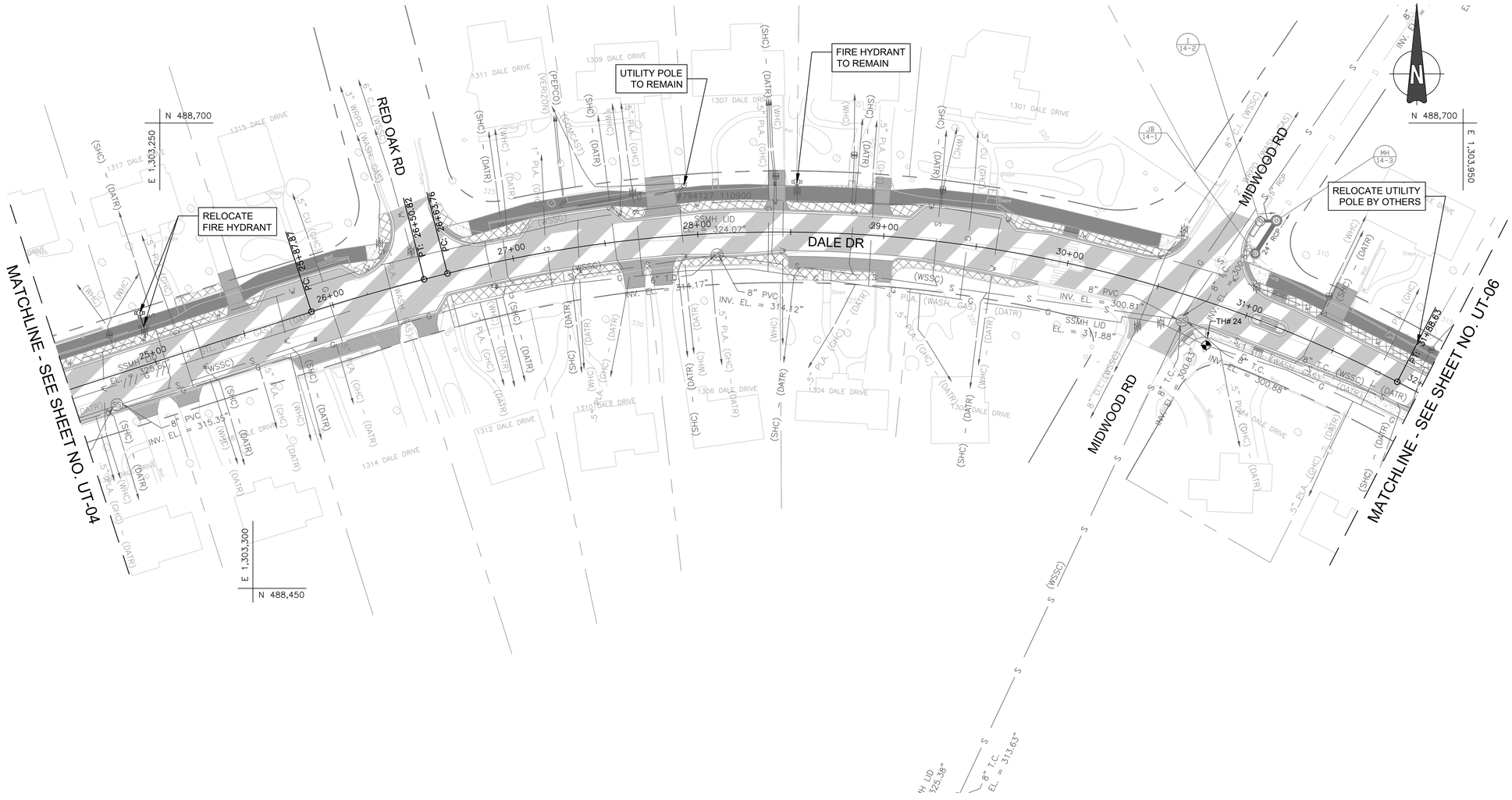
0 30' 60'

SCALE: 1"=30'

DATE: NOVEMBER 2022

CIP No.: 502109

SHEET 108 of 181



Utility Test Pit Data				
Point #	Description	Depth	Northing	Easting
24	GAS	4.58'	488580.5595	1303811.6867

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NOT FOR CONSTRUCTION

NO.	REVISION	DATE	BY

MONTGOMERY COUNTY
DEPARTMENT OF TRANSPORTATION
GAITHERSBURG, MARYLAND

RECOMMENDED FOR APPROVAL

Chief, Design Section — Date

APPROVED

Chief, Division of Transportation Engineering — Date

Designed by: ADH Drawn by: TRS Checked by: JJR

UT-05
UTILITY PLAN
DALE DRIVE
SHARED USE PATH

0 30' 60'

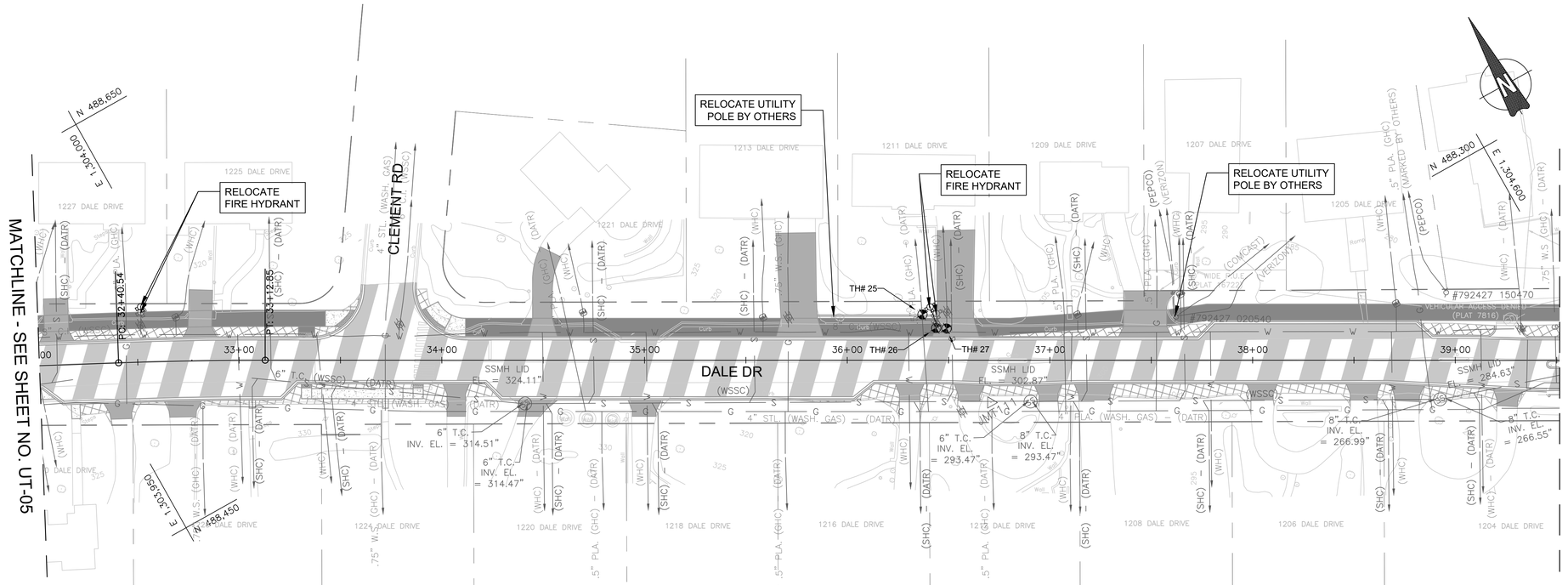
SCALE: 1"=30'

DATE: NOVEMBER 2022

CIP No. : 502109

SHEET 109 of 181

FILE NAME: Q:\2018\1804565_001_Dale_Drive_Pedestria\CADD\pUT_Dale.dwg LAYOUT NAME: UT-05 PLOTTED: Tuesday, November 22, 2022 - 7:34pm USER: AHavener



Utility Test Pit Data				
Point #	Description	Depth	Northing	Easting
25	GAS	0.00'	488363.7134	1304317.9581
26	WATER	4.59'	488354.5824	1304320.5844
27	WATER	4.07'	488351.8651	1304324.9117

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NOT FOR CONSTRUCTION

NO.	REVISION	DATE	BY

MONTGOMERY COUNTY
DEPARTMENT OF TRANSPORTATION
GAITHERSBURG, MARYLAND

RECOMMENDED FOR APPROVAL

Chief, Design Section — Date

APPROVED

Chief, Division of Transportation Engineering — Date

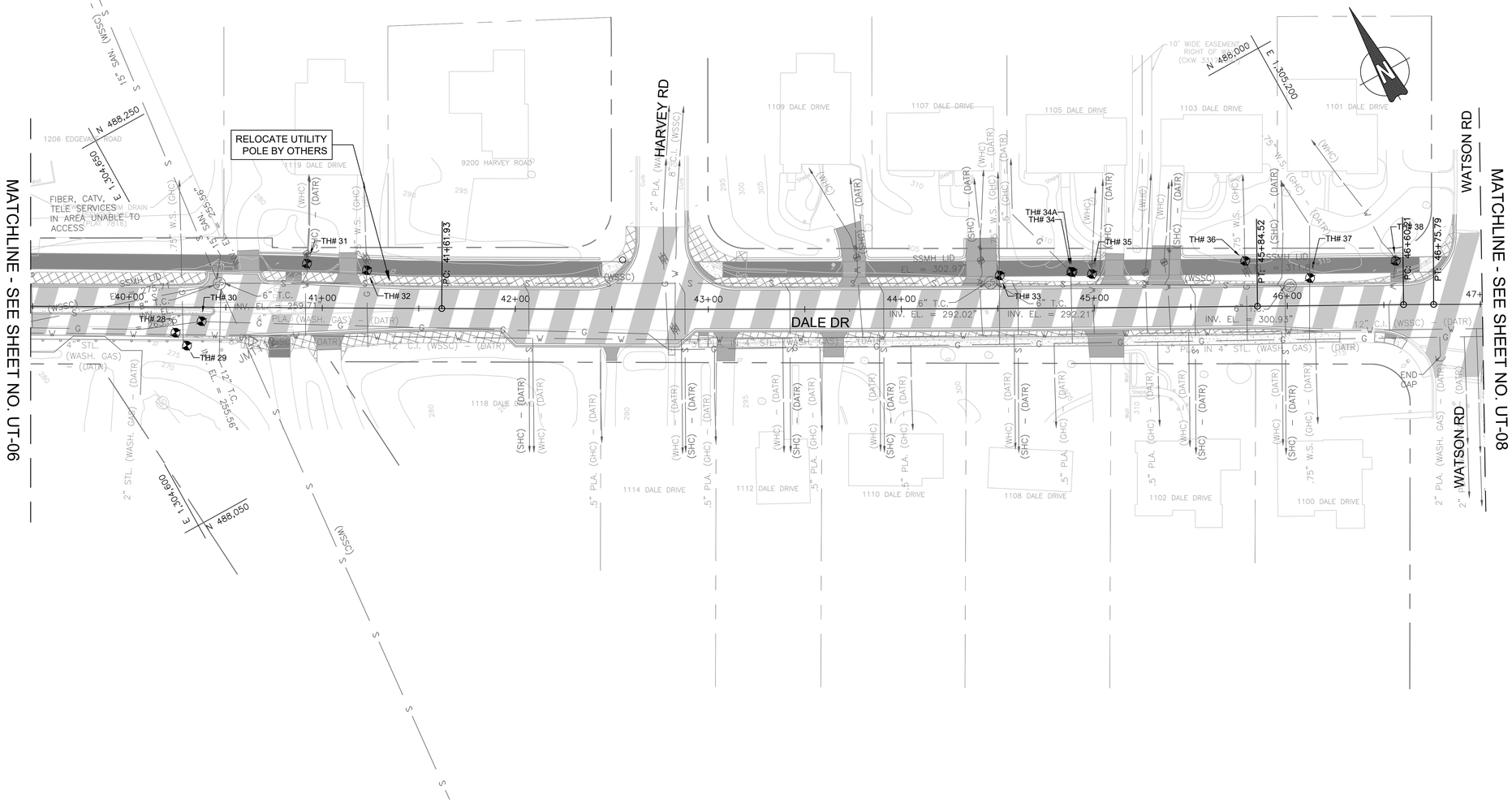
Designed by: ADH Drawn by: TRS Checked by: JJR

UT-06
UTILITY PLAN
DALE DRIVE
SHARED USE PATH

0 30' 60'

SCALE: 1"=30' DATE: NOVEMBER 2022

CIP No.: 502109 SHEET 110 of 181



Utility Test Pit Data				
Point #	Description	Depth	Northing	Easting
28	N.U.F.	0.00'	488142.9983	1304637.8088
29	N.U.F.	0.00'	488134.2498	1304639.6749
30	GAS	3.54'	488141.6422	1304652.5095
31	N.U.F.	0.00'	488141.2797	1304714.6867
32	GAS	2.08'	488123.2090	1304740.1614
33	GAS	1.55'	487961.9020	1305025.6207
34a	GAS	3.20'	487945.2691	1305059.4195
34	GAS	2.06'	487945.5347	1305058.9358
35	WATER	4.95'	487939.3940	1305067.7640
36	GAS	5.00'	487906.8410	1305140.5034
37	GAS	3.06'	487882.8227	1305165.5972
38	WATER	4.88'	487869.0348	1305208.7069

DRAFT
NOT FOR CONSTRUCTION

NO.	REVISION	DATE	BY

MONTGOMERY COUNTY
DEPARTMENT OF TRANSPORTATION
GAITHERSBURG, MARYLAND

RECOMMENDED FOR APPROVAL

Chief, Design Section — Date

APPROVED

Chief, Division of Transportation Engineering — Date

Designed by: ADH Drawn by: TRS Checked by: JJR

UT-07
UTILITY PLAN
DALE DRIVE
SHARED USE PATH

0 30' 60'

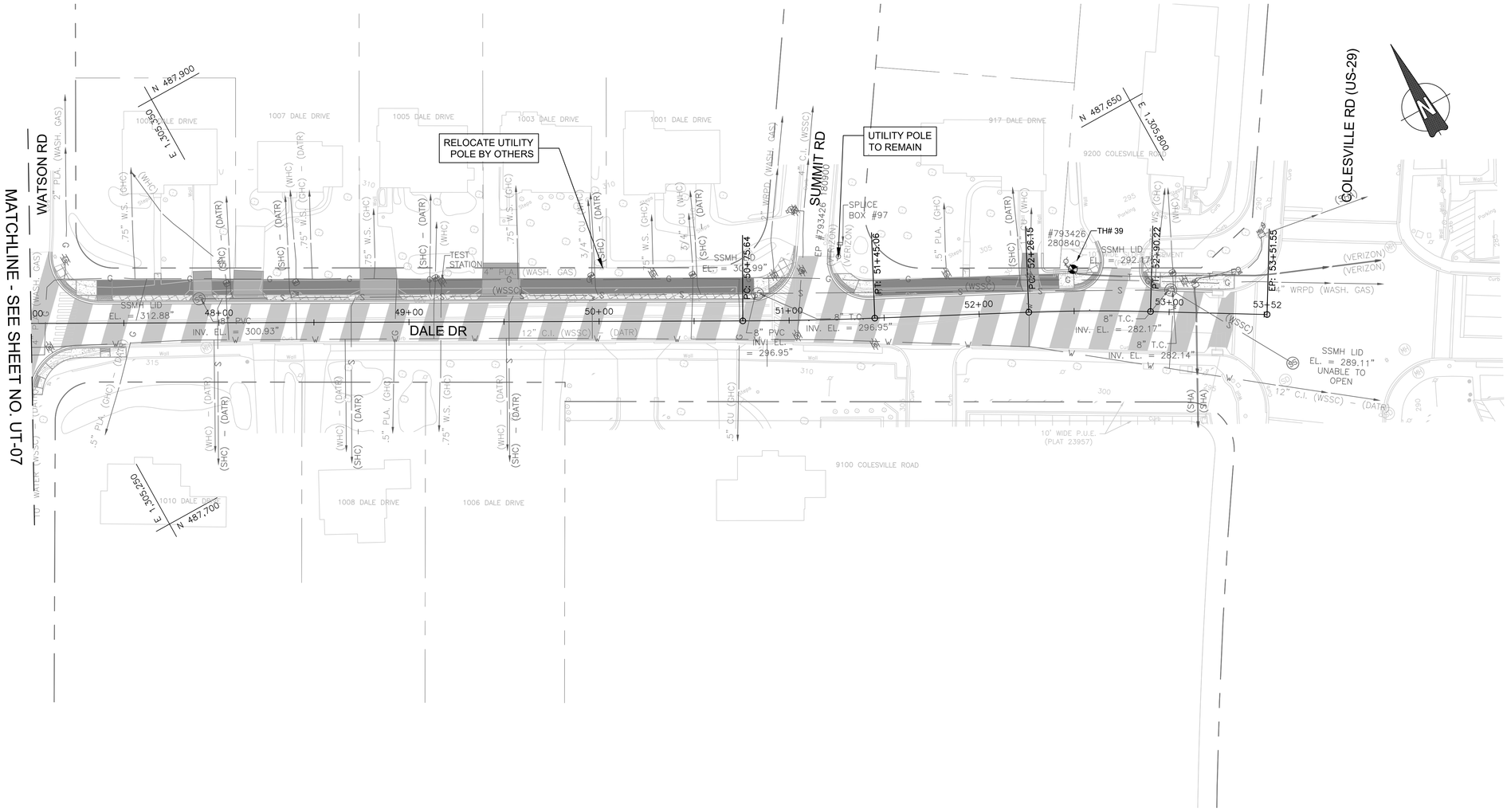
SCALE: 1"=30'

DATE: NOVEMBER 2022

CIP No. : 502109

SHEET 111 of 181

FILE NAME: Q:\2018\1804565_001_Dale_Drive_Pedestria\CADD\pUT_Dale.dwg LAYOUT NAME: UT-07 PLOTTED: Tuesday, November 22, 2022 - 7:34pm USER: AHavener



Utility Test Pit Data				
Point #	Description	Depth	Northing	Easting
39	VERIZON	4.95'	487586.7750	1305730.4022

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NOT FOR CONSTRUCTION

NO.	REVISION	DATE	BY

MONTGOMERY COUNTY
DEPARTMENT OF TRANSPORTATION
GAITHERSBURG, MARYLAND

RECOMMENDED FOR APPROVAL

Chief, Design Section — Date

APPROVED

Chief, Division of Transportation Engineering — Date

Designed by: ADH Drawn by: TRS Checked by: JJR

UT-08
UTILITY PLAN
DALE DRIVE SHARED USE PATH

0 30' 60'

SCALE: 1"=30' DATE: NOVEMBER 2022

CIP No. : 502109 SHEET 112 of 181

FILE NAME: Q:\2018\1804565_001_Dale_Drive_Pedestria\CADD\pUT_Dale.dwg LAYOUT NAME: UT-08 PLOTTED: Tuesday, November 22, 2022 – 7:35pm USER: AHavener